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This report is a part of Phase I of the Detroit Metropolitan Library Project and contains suggestions for methods and procedures for Phases II and III of the Project in which patron use and costs of patron services at the Main Library are to be measured. The report includes recommendations for new instruments for measuring patron use and appropriate changes in financial record keeping which should facilitate the determination of true costs of patron services. The recommendations are made in light of the Project's overall objective to study means of bringing the reference and research resources of the Detroit Public Library to all citizens of the six county metropolitan area and to provide a realistic and equitable basis of financial support to the library so that it can effectively accomplish this goal. Methods for the development of a formula for determining cost of patron services appear in Appendix A. Appendix B presents a method for determining place of residence by county of current registrants of the Detroit Public Library. (Author/CC)

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METHODS AND PROCEDURES FOR MEASURING PATRON USE AND COST OF PATRON SERVICES FOR THE DETROIT METROPOLITAN LIBRARY PROJECT

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METHODS AND PROCEDURES FOR MEASURING PATRON USE AND COST OF PATRON SERVICES FOR THE DETROIT METROPOLITAN LIBRARY PROJECT

by

Nelson Associates, Incorporated

January 1967

This report is submitted solely for the information and benefit of the client to whom it is addressed.

NELSON ASSOCIATES, INCORPORATED • 845 THIRD AVENUE, NEW YORK, N.Y. 10022 • 212 HA 1-3110

January 17, 1967

Miss Genevieve M. Casey, and
Dr. G. Flint Purdy
Project Directors
Detroit Metropolitan Library Project
5201 Woodward Avenue
Detroit, Michigan

Dear Miss Casey and Dr. Purdy:

We submit herewith our report containing our suggestions for methods and procedures to be used during Phases II and III of the Detroit Metropolitan Library Project for measuring patron use and costs of patron services at the Main Library. In addition we have included our recommendations for new instruments or changes in existing instruments for measuring patron use and appropriate changes in financial record keeping which should facilitate the determination of true costs of patron services. Our recommendations are made in the light of the project's overall objective to study means of bringing the reference and research resources of the Detroit Public Library to all the citizens of the six-county metropolitan area and to provide a realistic and equitable basis of financial support to the library so that it can effectively accomplish this goal.

The Detroit Public Library, one of the nation's outstanding reference and research libraries, already keeps certain records which provide it with figures on total annual use. In addition, some of the information it presently gathers, such as the evaluation of its collections and services to meet specific patron needs, are of great use to the library in developing its community role, but are essentially outside the scope covered by this report. We assume that the library will continue to keep all the records on patron services it is presently keeping but with the modifications and additions we have recommended, if accepted, to give added information useful to the objectives of the demonstration project.

We have kept our recommendations for changes in record keeping as limited in number and simple in form as possible to accomplish the goals of the project without undue disturbance of either the library patrons or library staff. We urge, however, that the record-keeping instruments, both old and new, be kept as completely and accurately as possible, especially during the periods of intensive study so that the analysis based on them will be reliable.

A substantial part of the data on which this study and analysis was based came from interviews with the directors and many staff members of all the departments of the Detroit Public Library. To Dr. Ralph Ulveling, Director of the Library, and all the members of his staff, we wish to express our thanks and appreciation for cordially giving us their time and full cooperation. We are particularly indebted to Robert Armstrong, Business Director of the Library, whose full and continuing assistance was essential to the completion of the cost analysis.

We are pleased to acknowledge the able assistance of Frank Mlynarczyk, Instructor at the Krannert Graduate School of Industrial Administration at Purdue University.

We stand ready to discuss with you and to interpret further our suggestions and recommendations in this report and to assist you in any way in implementing Phases II and III of the Detroit Metropolitan Library Project.

Very truly yours,

NELSON ASSOCIATES, INCORPORATED

TABLE OF CONTENTS

Page

INTRODUCTION 1

Chapter I METHODS AND PROCEDURES FOR MEASURING PATRON USE 4

Measuring Use of the Main Library Building 4

Measuring Use of the Circulating Collection 5

Measuring Use of the Reference Collections 11

Measuring Use of Special Services 17

Time Periods for Gathering Data for Study 19

Summary 22

Chapter II METHODS AND PROCEDURES FOR DETERMINING THE COST OF PATRON SERVICES 24

Facilities and Organization of the Detroit Public Library 24

Service Cost Determination 26

A Summary of the Cost Formula 27

Some Concluding Suggestions for Relating Costs to Patron Use 29

APPENDIXES

Appendix A DEVELOPMENT OF FORMULA FOR DETERMINING COST OF PATRON SERVICES

Section A-1 Fringe Benefit Application Rate Calculation

Section A-2 Library and Office Supplies and Expense Calculation and Distribution

Section A-3 Book, Periodical, and Film Purchase Costs Calculation and Distribution

Section A-4 Telephone Costs Calculation and Distribution

Section A-5 Other Direct Costs Calculation and Distribution

Section A-6 Total Direct Costs of All Departments and Sub-departments

Section A-7 Offset Accounts and Miscellaneous Revenues

Section A-8 Total Department and Sub-department Cost Calculation and Allocation

Section A-9 Calculations of Costs for Patron Services in the Main Library of the Detroit Public Library

Appendix B METHOD AND PROCEDURE FOR DETERMINING PLACE OF RESIDENCE BY COUNTY OF CURRENT REGISTRANTS OF THE DETROIT PUBLIC LIBRARY

INTRODUCTION

The Detroit Public Library, with more than two million volumes, is a large and outstanding community resource for the entire Detroit metropolitan area. In fact, its special collections are known and called upon by scholars far beyond the city limits in all parts of Michigan and in areas outside the state. With circulation figures between four and five million and with assistance provided to more than two million patrons a year, the Detroit Public Library is one of the major public reference and research libraries in the United States.

Statistics by themselves never tell the whole story. In the Main Library of the Detroit Public Library are housed important reference and research collections, most of which are available, at least in part, for circulation, and all of which are open to use by patrons on the premises. These reference and research resources are called upon for use regularly by universities, colleges, schools, businesses, industries, professional groups, and individuals from throughout the metropolitan community, and with improvements in education, advancements in science and technology, and the steady population growth in the area, the demands for these resources have steadily increased.

The Detroit metropolitan community is much larger than the City of Detroit alone. The metropolitan area includes all of Wayne County and the counties of Oakland, Macomb, St. Clair, Washtenaw, and Monroe. Like most other metropolitan areas in the United States, Detroit's population has been shifting since 1950 with the main city losing population and the suburban areas substantially gaining. In the ten-year period from 1950-1960, Detroit's proportion of the total metropolitan population decreased from 60% to 44%; this percentage decrease was accompanied by an actual decrease in numbers as well. Thus, while demands for the services of the Detroit Public Library increase, the population base that supports the library decreases.

The goals of the Detroit Metropolitan Library Project are to study the means of bringing the resources of the main building of the Detroit Public Library to all citizens of the six-county metropolitan area and to determine equitable means of supporting the extended provision of these services. The demonstration project has been divided into three phases: Phase I, of which this survey is a part, is the period of preliminary study and planning; Phase II will demonstrate the extension of Main Library resources and services to residents of Wayne County outside Detroit, and to Oakland and Macomb Counties; and Phase III will extend the demonstration to St. Clair, Washtenaw, and Monroe Counties.

Under present operating rules, full and free access to the Detroit Public Library is open to any person who lives, owns property, works or goes to school in the City of Detroit. Persons in the metropolitan area who do not qualify under these rules can use the facilities of the Detroit Public Library on payment of a ten dollar annual fee. During Phases II and III, persons in the six-county metropolitan area who do not now qualify for free use will be given this privilege for the Main Library only. The opening of the Main Library's reference and research resources to this larger public will have an impact on all the patron-serving departments in the central library. Even under present rules for use of the library, a substantial part of Main Library use comes from outside the City of Detroit. An eight-day survey by the library itself, as recently as April 1966, showed that more than one-third (35.4%) of the more than 15,000 respondents questioned during that period came from outside the city. It is anticipated that the number and proportion in this group will increase during the two phases of the demonstration project.

It should be clearly understood that not all the facilities and services of the Detroit Public Library will be open to all residents of the six-county metropolitan area during the demonstration project. The extension of free privileges to use the library's services and facilities is limited to those provided at the Main Library on Woodward Avenue. The services to be opened include important departments of Reference Services, Home Reading Services, and Community and Group Services. Within Reference Services all the major subject matter collections within the Main Library will be made available to all patrons from the metropolitan area. These departments include Fine Arts; History and Travel; Automotive History; Language and Literature; Business and Finance; Philosophy, Religion, and Education; Rare Books; Sociology and Economics; the Burton Historical Collection; Technology and Science; General Information and Biography; and Music and Performing Arts. These 12 departments house most of the vast reference and research resources held by the Detroit Public Library. From the Home Reading Services, use of the Browsing Library, Children's Library, Schools Department, Educational Films Department, and the Children's Services and Young Adult Services will be extended to all patrons of the Main Library as well as use of the general circulating collections in the subject matter departments.

Excluded from the demonstration are the Downtown Library, the Municipal Reference Library, and the 27 branch libraries. These excluded facilities will continue to operate during the demonstration project as they have in the past. The distinguishing of included and excluded facilities and services is a significant factor underlying the recommendations and discussion in this report.

The Detroit Public Library is supported mainly by the taxpayers of Detroit, but serves the much broader metropolitan community. In order to determine the extent to which the reference and research library services housed in the Main Library are used by non-Detroiters, some methods, which will not needlessly disturb or delay either patrons or librarians, are needed for measuring total use of these services and determining the place of residence of the patrons. Chapter I provides detailed proposals for meeting this need.

The purposes of Chapter II are to analyze the costs of patron services of the Detroit Public Library so as to provide a realistic and equitable basis for support of the Detroit Public Library, and to suggest any appropriate changes in the financial record keeping which may facilitate the determination of true costs of the patron services in the Main Library. Finally, the report suggests appropriate ways for relating the measures of patron use to the costs of patron services which can be used to determine equitable means for supporting the extension of these services to the six-county metropolitan area.

Chapter I

METHODS AND PROCEDURES FOR MEASURING PATRON USE

To measure intensive use of a heavily patronized institution, such as the Main Library of the Detroit Public Library, on a long-term continuing basis presents certain problems. Any measurement needs the cooperation and time of both patrons and librarians if it is to be full and accurate, yet it should not cause undue trouble or delay for librarians or patrons. In addition, it should not involve substantial added expense to the library.

With these factors to be considered, the methods and procedures for measuring patron use suggested in this chapter are a deliberate combination of continuing routine procedures that are unobtrusive and easily administered, on the one hand, and on the other several infrequent but representative periods of intensive measurement. The periods selected for intensive study and analysis are discussed in more detail later in this chapter.

MEASURING USE OF THE MAIN LIBRARY BUILDING

All librarians in any library which is open to a large number of patrons are aware that many patrons use the facilities of a library in ways which are not ordinarily recorded specifically in detail. For example, a patron may use a periodical index on an open shelf for bibliographical information and never ask the assistance of a librarian or charge out a book, so that ordinarily his use of the library is not recorded. In the April 1966 short library survey, referred to above, only 26.7% charged out any books and 55.4% reported doing reference work. Even if it is assumed that these figures represent totally separate groups of individuals, there is still a remainder of 17.9% (more than one out of six) who neither borrowed a book nor did reference work, yet were in the library and presumably made some use of its facilities. They may have used books on open shelves, or browsed through books and magazines, or used the card catalog, or used the building as a place to study, or listened to records, or any one of several other activities which are not regularly recorded in library statistics.

This kind of library use which is substantial in numbers of patrons is difficult to measure and evaluate. At present, the Detroit Public Library's only measurement covering total building use by patrons is an electronic door count. At each of the three entrances (Woodward Avenue, Cass Avenue, and the Children's Library) an electronic eye records the number who enter. A weekly report is made recording the daily and hourly numbers for each door. It should be noted that this device counts entrances, not individuals; the same person entering several times in one day is counted several times. There is no way of determining, from these electronic counts, where the patron comes from.

It is suggested that during those short periods in Phase II and Phase III which are selected for special study (the periods to be selected are discussed more fully below) one additional item of information should be asked from each patron at the time of his exit; namely, the county in which he lives. At each of the three main exits, a door guard is stationed to check briefcases, packages, and so on. With little extra effort, the guard could ask each patron his place (Detroit or a county name) of residence and mark it on a simple daily form. (See Figure 1.) Such a tabulation should be made for at least one seven-day period in each of the demonstration phases of the project, and should give an indication of the residence distribution of all who use the Main Library for any purpose.

MEASURING USE OF THE CIRCULATING COLLECTION

Within the Main Library of the Detroit Public Library are housed both circulating and reference collections. Departments, such as the Browsing Library, have collections in which all, or almost all, items, circulate through general loan procedures. On the other hand, departments, such as the Burton Historical Collection, Rare Books, and Automotive History, have non-circulating collections which are entirely reference. Other departments have collections partly circulating and partly reference. Some reference materials do circulate for short periods of time under limited conditions and the records on these will be discussed below. Except for the Children's Library which has its own chargeout desk, regular circulating materials from all other departments are ordinarily charged out through the Loan and Registration Bureau which has desks near both the Woodward Avenue and Cass Avenue entrances, although chargeouts of children's books can be made at these desks and adult books can be charged out through the desk in the Children's Library.

FIGURE 1

Report on Place of Residence of All Building Patrons

Entrance______________ Date______________

Residence	Tabulation	Total
Detroit		
Wayne County (outside Detroit)		
Oakland County		
Macomb County		
St. Clair County		
Washtenaw County		
Monroe County		
All Other		

In order to borrow materials from the library, the patron ordinarily must be registered. At present, the patron applies for registration by completing a simple card form on which is included space for home address and business address so that the library has a record of place of residence for all its authorized borrowers. The card form, which will be continued during the demonstration project, comes in four colors with some modifications of the questions asked for the different registration classifications. A white card is used for adults, green for young adults, pink for children, and yellow for companies. The white adult card with the word "Annual" stamped on it is used for registrants who are subject to the annual fee because they do not qualify for free registration. All registrations, except the annual paid one, are for three (3) years.

It is suggested that all registration application cards have added a line for the county to be listed at the upper right hand corner of the front of the card. Until new cards are printed with this line included, a small rubber stamp could be used with the county's name and this could be placed on each card.

All the registration cards, regardless of the place where the application is made (Main Library or branches), and regardless of classification (except for company cards which are filed separately) are filed centrally and alphabetically in the Main Library. Many of the presently registered library patrons are not residents of Detroit, but because they own property, work, or go to school in the city, are entitled to free library privileges. Services to these patrons are a part of the larger picture of service to non-Detroit residents, and it would be useful to know how many are involved and where they do reside. Because the total number is so large, an actual count would be costly and time-consuming. Instead, a scientific sampling of the total registration can be made and an estimate of the county distribution of the registrants determined within an accuracy approximating one (1%) percent. A detailed description of the procedure to be used in selecting and analyzing the samples is included in Appendix B.

For company cards, the number of registrants is so small that a sampling is not necessary. An actual count by county of company cards should be made including a determination of whether the cards are issued under the rules for free company use of the library or on an annual fee basis.

It is expected that individual and company applications for free use of the Main Library will increase during Phases II and III of the demonstration project. It is necessary to have a record of these applications coming as a direct result of opening the library to wider patronage. Because an additional colored card for each of the classifications might become too confusing, it is suggested that the present registration applications (including the designation of the county) be used and that a small red tab be securely affixed above the county name in the upper right hand corner. The tab will permit easy spotting in the central files once the applications are interfiled. A daily count of these special registrations by county and classification of application should be kept by the Registration Bureau and a monthly total submitted to the Director of Home Reading Services throughout the entire demonstration period. (See Figure 2.)

FIGURE 2

Registration Bureau
New & Renewal Registrations

Date______________

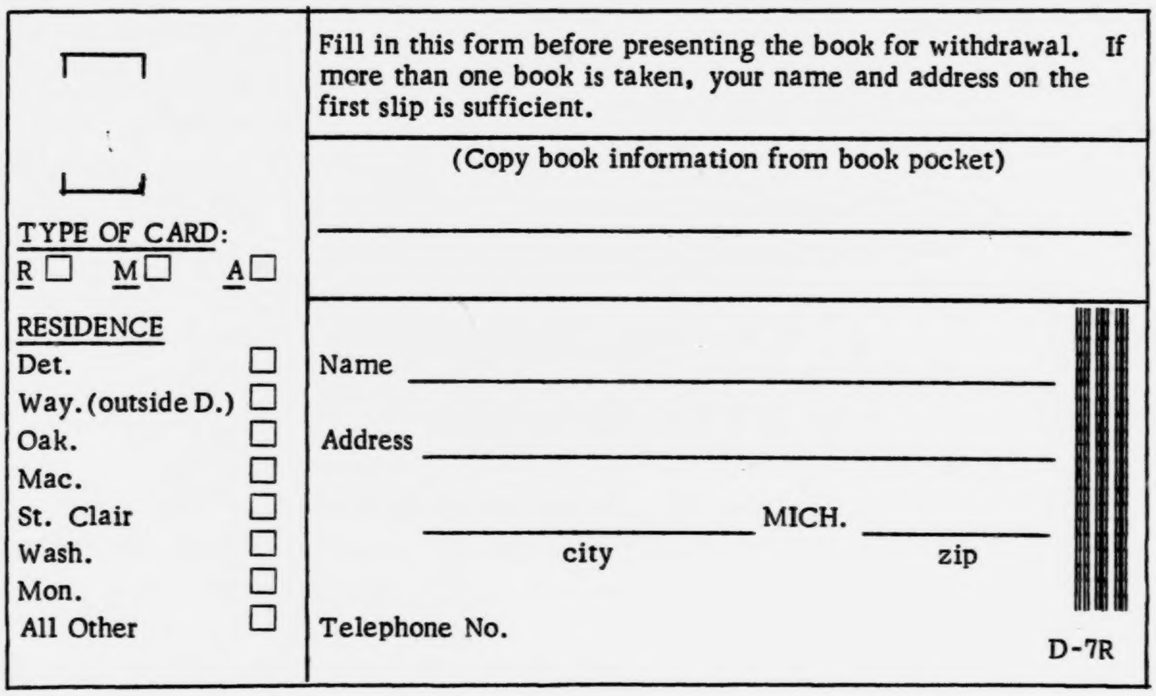
Registrant's Location	Type of Registration		
	Regular	Annual	Metro
Detroit			
Wayne County (outside Detroit)			
Oakland County			
Macomb County			
St. Clair County			
Washtenaw County			
Monroe County			
All Other			

Once an application has been approved, the individual patron is given a Detroit Public Library Identification Card which he is required to show when borrowing materials from the library. These cards are white or salmon colored for Detroit or non-Detroit residents respectively and are printed and have a horizontal stripe across the top in black, green, or red for adult, young adult, and child respectively. An all yellow card is issued to companies, and a white card with a vertical yellow stripe on the left and the word "Annual" printed in yellow is used for patrons who pay the annual borrower's fee. It is understood that the library plans to use, if feasible, during the demonstration project, the same salmon card for non-Detroit residents with a big letter "M" overprinted to indicate that these special cards are to be used for borrowing only from the Main Library. Such cards are referred to below as "Metro" cards.

Within the Main Library all materials in the circulating collection are loaned through three desks – one near the Woodward Avenue entrance, one near the Cass Avenue entrance, and one near the outside entrance to the Children's Library. The only record kept of circulation is the white call slip on which the patron enters the book information and his name, telephone number, and address. The charge-out librarian inserts a numbered key-punched card into the book and the number of the card is written by the librarian on the call slip. If the patron fills out requests for several books, he need only enter his name and address on the first slip, although each slip receives a transaction number in sequence.

The call slips do not have information on counties specifically, and it would be useful to have such information quickly ascertainable during demonstration project time periods when loan patterns might be analyzed. It is suggested, therefore, that the librarian assigning a transaction number to the call slip should also be responsible for noting the place of residence of the borrower. To make this as easy and time-saving as possible, the call slip, which is presently blank in the lower left hand corner below the space for the transaction number, should be printed with the appropriate places listed with a block for the librarian to check. (See Figure 3.) Because of the limited space for printing, abbreviations of the names can be used.

FIGURE 3



TYPE OF CARD:
R ☐ M ☐ A ☐

RESIDENCE
Det. ☐
Way. (outside D.) ☐
Oak. ☐
Mac. ☐
St. Clair ☐
Wash. ☐
Mon. ☐
All Other ☐

Fill in this form before presenting the book for withdrawal. If more than one book is taken, your name and address on the first slip is sufficient.

(Copy book information from book pocket)

Name

Address

MICH.
city zip

Telephone No.

D-7R

During the demonstration period, a borrower from outside Detroit, but within the project area, will have three possible plans which entitle him to borrow from the Detroit Public Library. (1) He may be permitted free privileges because he owns property, works or goes to school in Detroit. (2) He may have free privileges in the Main Library only because of the extension of these privileges during the demonstration. (3) He may not have free privileges under (1) above and may want to use branches as well as the Main Library so that he registers by payment of the annual fee.

On the assumption that the relatively small percent of library patrons using plan number (3) are mainly interested in using the important reference and research resources of the Main Library which under the demonstration project will be opened to them for free use, it is suggested that the library should not issue new annual fee registration cards after the project begins and eventually discontinue completely this plan of registration for residents of the metropolitan area. The effect in time would be to turn the small number of non-Detroit residents now paying to use both the branch libraries and the Main Library to using their local municipal and county libraries as a substitute for using Detroit branch libraries while still being permitted to use the Main Library but without paying a fee. This change may cause a small loss in income to the Detroit Public Library at first, but this loss would in time be recovered through other plans developed to cover costs of services to patrons residing outside Detroit.

Although the demonstration is concerned mainly with the persons under plan (2) above, it would be useful to have a complete picture of cardholders and borrowers during any period of study. For that reason, a second added item is printed on the front of the call slip which the librarian should also note by checking the appropriate box. (See Figure 3.) A line is added immediately below the space for the transaction number to indicate the type of card (Regular, Metro, or Annual) which the borrower holds. Again because of limited space only the first initial of the card type (R, M, or A) is printed on the call slip and a box is provided for the librarian to check. If the insertion of these two items of information on the front of the call slip is not practical because of the limited space, they could be added to the back of the call slip instead.

Call slips are kept in trays and arranged by the assigned number. They are discarded when a book is returned within its regular schedule or filed separately when the book is overdue and discarded when the overdue book is recovered. During the demonstration the call slips, for selected periods, should be kept for further study. At least two one-week periods, during each of the demonstration phases, should be selected for additional study. The Detroit Public Library circulates from 1,500 to 2,000 items a day on an average through its Main Library. At the end of each day of the selected study week, the loans by type of card and place of residence for each card type should be tallied. It is essential to do this immediately to record this distribution of loans before materials are returned, items become overdue, or some other factor enters to scatter the call slips for a specific day. This tally will report the distribution of items loaned according to type of card and place of residence; it will not report the number of individuals who borrowed materials and how many items were borrowed by each individual, although this information could be tallied, also, if the library so wished.

MEASURING USE OF THE REFERENCE COLLECTIONS

Reference Services is divided into thirteen subject-matter patron-serving departments of which twelve are located in the Main Library. With the exception of the Burton Historical Collection, Automotive History, and Rare Books which do not ordinarily circulate any materials, all of these subject departments house materials which are part of the circulating collection and others which are for reference use within the building. The circulating materials in the subject departments are loaned for use outside the building through the Central Loan and Registration Bureau and records of these loans are available as discussed above.

The reference services provided by the subject departments fall into three general categories: (1) from persons in the building requests for information or assistance in finding information; (2) the same kinds of requests coming by telephone; and (3) the provision of materials in open and closed stacks for the use of the patron. In the case of the materials in open stack areas, the patron may locate and use the materials with or without the assistance of the librarian. If he locates a book, picture, or record and uses it without assistance of the librarian, there is, at present, no record of this use in the library. The patron would, of course, have been counted by the electronic door devices, but with no way of recording his place of residence. As described above, however, this type of patron would be counted by his place of residence at the exit doors during selected time periods of study.

For the patron who wants to use materials not on open shelves, a special call slip (a few additional forms are mentioned below) is submitted to the appropriate librarian. This call slip, at present, contains only the book author's name, title and call number; there is no place for identification of the borrower on this slip. It is recommended that a special slip be printed having the present information on it plus space for the librarian to check the borrower's place of residence. (See Figure 4.)

FIGURE 4

Call Slip for Reference Materials To Be Used in Building

Call No. ______________________________

Author ______________________________

Title ______________________________

Please check place of residence:

Detroit ☐
Wayne County (outside Detroit) ☐
Oakland County ☐
Macomb County ☐
St. Clair County ☐
Monroe County ☐
Washtenaw County ☐
All Other ☐

The additional forms are the following. For persons who wish to borrow pictures from the Fine Arts Department, a special form is presently used with three questions designed to assist the department in improving the quality and usefulness of its picture collection. To this form should be added, at the top, a space for marking place of residence of the borrower and a space for the number of pictures borrowed. (See Figure 5.) In the Burton Historical Collection special request forms are used for newspaper and for manuscript materials. These forms already record the patron's name and address and should be retained. All materials in the Rare Books Collection are used within that room, and the patron is required to sign a special slip including the listing of his address and provide the department with a record of use of its materials. All of these call slips, both general and special, should be kept for the periods of Phase II and Phase III.

FIGURE 5

DETROIT PUBLIC LIBRARY
FINE ARTS DEPT.
PICTURE ROOM

Number Borrowed____________________

Place of Residence

Detroit ☐
Wayne County (outside Detroit) ☐
Oakland County ☐
Macomb County ☐
St. Clair County ☐
Monroe County ☐
Washtenaw County ☐
All Other ☐

WITH YOUR COOPERATION, WE HOPE TO IMPROVE THE QUALITY AND USEFULNESS OF THE PICTURE COLLECTION. KINDLY ANSWER THE FOLLOWING QUESTIONS:

1. What pictures do you want? (In your own words)

2. In what way do you plan to use them? (Exhibit, study, etc.)

3. Are they for personal, company, school or group use?

THANK YOU

The Detroit Public Library permits, under some circumstances, loans for short periods of time of some of its reference materials. Most often these loans are made to companies. The loans are made by each department individually; they are not charged out through the central loan desks. All the reference departments use the same three-colored "Reference Charge Record" for these loans, and one copy (the white copy) is kept by the department as its record of the loan. The length of time this copy is kept varies from department to department ranging from discard of the slip when the loaned material is returned to keeping it indefinitely. These slips have on them space for the borrower's name and address. It is suggested that all departments using these slips keep the white copy for the entire period of the demonstration.

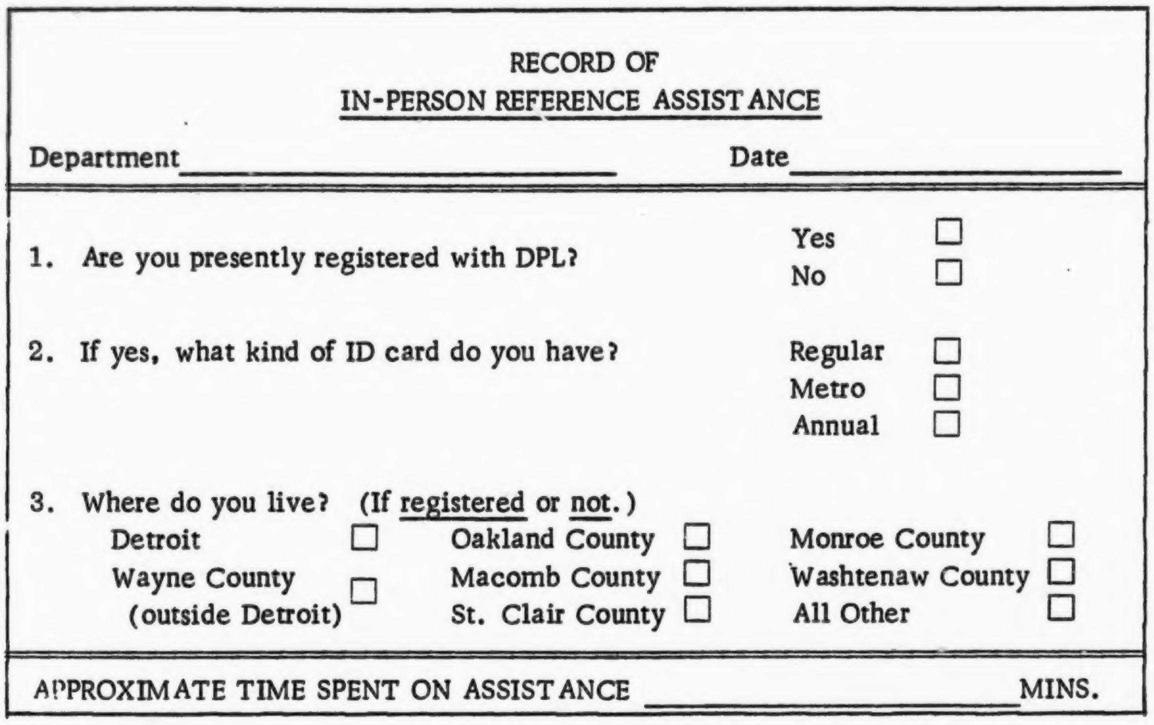
A major part of the service provided by the reference departments is the answering of questions by librarians from patrons present in person or calling on the telephone. A daily tally sheet is kept at present by each department recording the number of such questions received, but there is no information available on the patron's identity or residence. Asking each patron for this information could easily delay the work of the librarian, causing a drop in the total number served and possibly causing dissatisfaction on the part of the patron. The situation would be especially difficult in those departments which have only one librarian on duty during certain hours. To prevent any delays of this sort or inconvenience to the patron the following procedure is suggested.

During the time period selected for intensive study (one full week in Phase II and one in Phase III) each reference department librarian (and the Children's Librarian and Browsing Room Librarian) should be provided an assistant to record certain specified information from the patron without identifying the patron by name. A short record form would be filled out by the assistant for each patron seeking reference assistance or other assistance in person or by telephone. Copies of suggested forms are shown in Figures 6 and 7.

The assistant should work with the reference librarian at that desk in each department which is always manned during the library's open hours. When a patron comes to the desk for help the librarian could devote his time to the patron's request and the assistant would be responsible to complete the short form for each patron. If more than one desk is manned full time or during certain peak times of activity in each department, provision should be made for an assistant to work at each desk.

FIGURE 6

Record of In-Person Reference Assistance



RECORD OF
IN-PERSON REFERENCE ASSISTANCE

Department____________________ Date________________

1. Are you presently registered with DPL? Yes ☐ No ☐

2. If yes, what kind of ID card do you have? Regular ☐ Metro ☐ Annual ☐

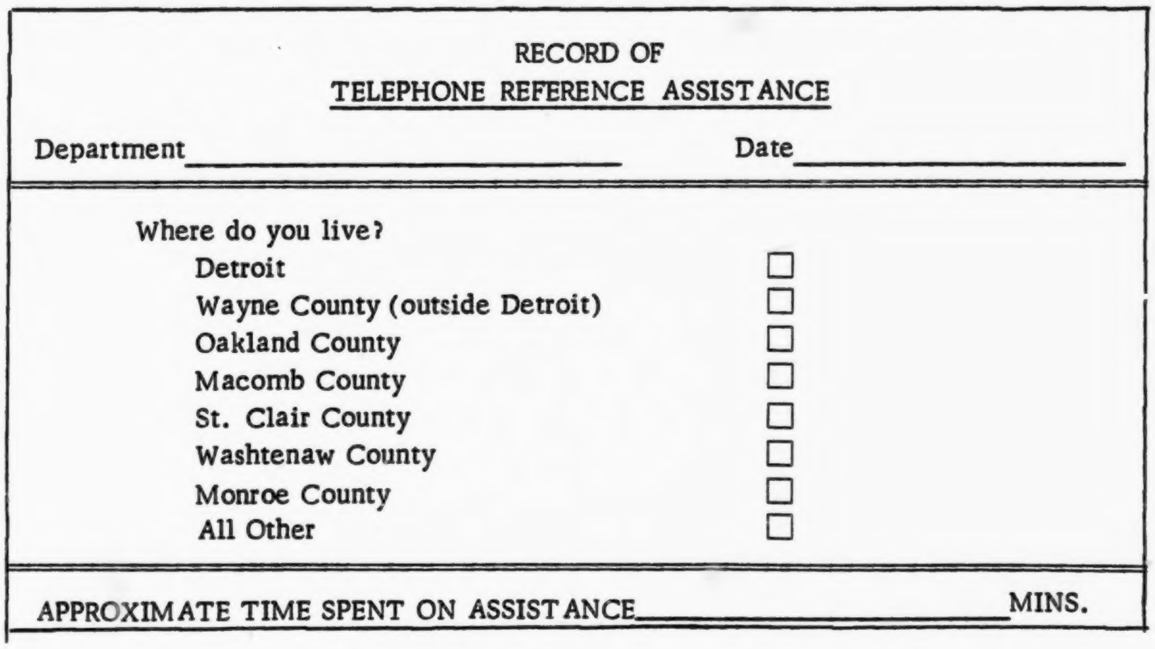
3. Where do you live? (If registered or not.)

Detroit	☐	Oakland County	☐	Monroe County	☐
Wayne County (outside Detroit)	☐	Macomb County	☐	Washtenaw County	☐
		St. Clair County	☐	All Other	☐

APPROXIMATE TIME SPENT ON ASSISTANCE ________________ MINS.

FIGURE 7

Record of Telephone Reference Assistance



RECORD OF
TELEPHONE REFERENCE ASSISTANCE

Department____________________ Date________________

Where do you live?

Detroit	☐
Wayne County (outside Detroit)	☐
Oakland County	☐
Macomb County	☐
St. Clair County	☐
Washtenaw County	☐
Monroe County	☐
All Other	☐

APPROXIMATE TIME SPENT ON ASSISTANCE________________ MINS.

To get information on telephone inquiries, during the week of special study, the assistant should answer all incoming telephone calls.

This should be done even if the librarian is free at the moment. On answering the call, the assistant could explain that the librarian is finishing another inquiry and would be with the caller in a moment. While waiting that moment the assistant should explain that a survey is being taken and ask the caller's cooperation in answering one question reporting his place of residence. The assistant would record this on the form he has (Figure 7) and on completing the question he would then turn the call over to the librarian to handle the caller's request for information.

(In addition to determining the place of residence of the caller, it might also be useful to know the place from where the call is coming. To get this information direct without asking each patron another question an inquiry was sent to the Michigan telephone company about the feasibility both technically and financially of attaching a mechanical or electronic device to the incoming telephone lines which would count the total calls by exchange area from which the call comes without monitoring any part of the call or identifying the specific caller. Discussions between the telephone company and the library indicated that such monitoring was not technically feasible at the present time.)

The assistants to the librarians need not be the same persons throughout the entire period of coverage. Instead, a group of persons might be used serving relatively short periods of time provided that the assistance is available for the entire period being studied. It is suggested that the assistants might be drawn from the student body of Wayne State University or other institutions of higher education in Detroit where students are seeking part time work, and these assistants would be paid on an hourly basis. The selection of assistants should be made far enough in advance of the period to be studied so that they can be thoroughly briefed on their duties (and what they should not be doing), on the purposes of what they will be doing, and on diplomatic and tactful ways of soliciting information from all types of patrons some of whom may refuse to give it. The assistant should understand the importance of getting accurate information without delaying the patron or librarian unduly and the importance of his obligation to appear for work during the time he has been assigned.

The main building of the library is open approximately 70 hours a week: Monday through Thursday, 9 a. m. to 9 p. m., Friday and Saturday, 9 a. m. to 5:30 p. m., and Sunday afternoons only. Assigning one assistant to each of 14 departments (12 in Reference Services and 2 in Home Reading Services) would call for 980 man hours a week. An estimate of the cost for these assistants is given below at two different hourly wage levels.

Estimated Costs for Assistants in
Reference Departments, Children's Library, and Browsing Library

14 departments at 70 hours a week for 980 hours @ $2.00 an hour	$1,960
For two weeks	3,920
980 hours at $2.50 an hour (one week)	2,450
For two weeks	4,900

It is suggested that the assistants, with the help of the librarians when necessary, record one other item of information for each patron seeking help. The amount of time spent on each inquiry may vary considerably from a quick answer to one or two hours of searching depending on the nature of the inquiry. The assistant should be asked to record an estimate of the time spent by the librarian in servicing the patron's request. This should be easily done when the request is quickly handled, but the assistant will need the librarian's help to get the approximate total time spent assisting the patron when a lengthy period of time is spent on the request by one or more staff members. Space is provided on the record forms for this information.

It is important for the librarian and assistant to work closely with a clear understanding that the assistant is not there to answer the patron's questions. The assistant's responsibilities are limited to completing the short survey form for each patron and the assistant should be prepared to explain this tactfully to the patron, if necessary. A separate count should be kept of the number of patrons who refuse to answer the questions in person or on the telephone, but it is expected that this number will be low.

MEASURING USE OF SPECIAL SERVICES

A. The Educational Films Department in Home Reading Services uses a registration card of its own and supervises its own circulation. At the time a visit was made to the department (the last week of October 1966) the department had approximately 3,000 registrations and was adding to these at the rate of 150 to 200 a month. The registration card presently in use includes the name and address of the organization borrowing films and of its representative. It expires on the same date as the patron's general library registration.

Starting with the beginning of Phase II and continuing through Phase III, it is suggested that these same registration cards be used with the addition of stamping in the upper lefthand corner the type of general library card (Regular, Annual, Metro) which the patron uses for his departmental registration. Throughout both phases of the demonstration it is recommended that a daily tally sheet and a monthly summary (using the same form) of new registrations be kept by type of card and county (see Figure 8). It is also recommended that as soon as possible an actual count be made of the distribution by organization address of registration cards presently in use.

The department has a record of its film bookings in duplicate. In each phase of the demonstration the yellow copy should be kept for at least one selected month for further study. From this copy should be tallied by organization address (Detroit and counties) the number of films booked and the number of persons in attendance.

Although the Educational Films Department is not a reference department it gets a large number of telephone and in person inquiries about its films. For one week in each phase of the demonstration a record should be kept of these inquiries on the same forms as used by the reference departments. Most of these inquiries are by telephone, and because of the limited space at the public inquiry desks of the department, it is suggested that the completion of the forms might be done by the regular department staff handling inquiries.

FIGURE 8

EDUCATIONAL FILMS DEPARTMENT
NEW AND RENEWAL REGISTRATIONS

Date____________________

Organization Location	Type of DPL Registration		
	Regular	Annual	Metro
Detroit			
Wayne County (outside Detroit)			
Oakland County			
Macomb County			
St. Clair County			
Washtenaw County			
Monroe County			
All other			

B. The Schools Department provides collections of books to elementary teachers for use in their classrooms. Each loan is recorded on a special form by the department. It is recommended that during the entire demonstration a daily tally and a monthly summary be prepared by the department reporting by Detroit or county address the number of schools from which teachers came to borrow collections and the number of books loaned to these schools.

C. Young Adult Services and Community and Group Services provide special assistance to schools and other community groups in the form of training programs, public media programs, and consultation on education, library materials, and other library services. During the demonstration a special effort should be made by these departments to record the names and addresses of all groups served and, if possible, an estimation of the amount of time devoted to working with each group. Particular attention should be given to noting service to groups from outside the City of Detroit.

D. A substantial part of the publications distributed by the Publications and Exhibits Department is distributed on open tables to patrons using the several library buildings. During the demonstration the department should record by location the requests it receives to mail publications in which the person or organization making the request can be identified. It should also keep a record of any exhibits it may place in schools or other organizations in the counties participating in the demonstration project.

E. The main building of the library is frequently the scene of group visits by classes from schools and other groups. Records of these group visits including the name of the group, where it is from, and the number included are presently kept in the Children's Library and in the office of the Reference Services Director for other departments in the main building. These records should be continued during the entire period of the demonstration project.

TIME PERIODS FOR GATHERING DATA FOR STUDY

Patron use of the Main Library of the Detroit Public Library varies with several factors which are known in general based on past experience. Use of the library varies with the hour of the day, day of the week, month of the year, and so on. School sessions and vacations also affect the numbers of patrons using the Main Library. The most complete and accurate records would be made up of actual count in the categories of data desired on a year-round basis. The great bulk of some of the library's services (circulation and reference assistance as mentioned above) is so great, however, as to preclude such detailed counting because the time and effort involved would be prohibitively expensive. At best, a total count over a long time period without breakdown into categories is all that can be made of these services. For that reason it is necessary to limit the time period in which a count by categories of some data is made, and to make this period most representative of the regular activities of the library's main building throughout the year.

The periods suggested below for intensive data gathering have been selected, with the advice of librarians heading the patron-serving departments, with the purpose of giving the best sample of patron use, avoiding the extremes of extra heavy and extra light use. From these periods of intensive study the data gathered should not be used to extrapolate total patron use of the Main Library; the total use figures will be taken from presently kept records on total circulation and total reference and other inquiries kept on tally sheets. Rather the data gathered in the intensive study periods will provide information on the distribution of circulation and reference services by place of residence of patrons.

Several time periods for intensively collecting representative data of different kinds are suggested in the subsections following.

A. One time only. Some of the suggestions above refer to the collection of certain data only one time during the demonstration. These data are the counts by location in Detroit or the participating counties of registrations in effect at the beginning of the demonstration. For general registrations this count would be based on a sampling as described in Appendix B. For company registrations and for special registrations in the Educational Films Department, the count should be a total one. Both the sampling and the total counts should be done no later than the first week of the demonstration.

B. Daily throughout entire demonstration. Several of the counts should be taken on a daily basis throughout both Phase II and Phase III of the entire demonstration. These daily tallies should be combined into monthly summaries. The activities included in these reports are the following:

- new general library registrations whether Regular, Annual, or Metro

- new registrations in the Educational Films Department

- loans on "Reference Charge Outs" by type of card and location of patron's residence

- call slips for reference materials from closed stacks including the special call slips for newspapers and manuscripts used by the Burton Historical Collection and the in-room slips used by Rare Books

- Schools Department reports by school, location, and number of books.

C. Monthly throughout entire demonstration. Reports on activities by the Young Adult Services, Community and Group Services, and the Publications and Exhibits Department should be prepared on a monthly basis regularly throughout the demonstration. The statistics on group visits to the Main Library including name, location, and number in the group should also be compiled on a monthly basis.

D. Selected time periods. Phase II of the demonstration will begin in February 1967. It is suggested that it be continued through July 31, 1967, instead of June 30 as presently scheduled, so that the two summer months are divided equally between the two phases. Phase III would begin on August 1, 1967 and extend for 11 months through June 30, 1968 or 12 months through July 31, 1968. In order to allow sufficient time for studying and analyzing the data gathered and for preparing a final report, it is suggested that all intensive study periods be completed by March 1, 1968. It is on this understanding and in consideration of factors mentioned at the beginning of this section that the following periods for intensive data gathering are selected:

- door survey of place of residence of walk-in patrons – one week in April and one week in October 1967

- general circulation call slip count by type of card and location of patron in Detroit or counties – one week each in April, July, and October 1967, and February 1968. During these weeks the call slips should be counted at the end of each day

- survey of in-person and telephone reference inquiries with assistants assigned to reference and other librarians – one week in April and one week in October 1967

- telephone inquiries to Educational Films recorded for the same weeks in April and October 1967

- film bookings by organization, location, and number in attendance tallied and reported by Educational Films for the entire months of April and October 1967.

SUMMARY

The goals of the Detroit Metropolitan Library Project, it will be recalled, are to study means of bringing the resources of the Main Library to all residents of the six-county metropolitan area and to determine equitable means of supporting the extension of these services. To that end, methods and forms for gathering data on patron use of the Main Library with special emphasis on the extent of patron use and the area from which the patron comes have been proposed in this chapter.

This section summarizes the new forms suggested and the revisions proposed for forms presently in use:

- a new form (Figure 1) should be used at the exit doors during selected periods to count all users of the building

- the present registration form should be revised to add a space for the county (or City of Detroit) of the registrant in the upper righthand corner. When the registration cards are filed after February 1, 1967, a red tab should be added to the same corner of the card to indicate it is a registration resulting from the expanded services of the demonstration project

- new and renewed registrations should be recorded daily on a new form (Figure 2)

- the general call slip used for circulating materials should be revised to include space in the lower lefthand corner for the type of card held by the borrower and for his place of residence (Figure 3)

- the call slip used for reference works from closed stacks to be used in the building should be revised to add some information identifying the patron (Figure 4)

- the special form for patrons requesting pictures should be revised to add information identifying the place from which the patron comes and the number of pictures he borrows (Figure 5)

- to gather information during selected periods on inquiries to each reference department, the Children's Library, and the Browsing Library, new forms should be used for in-person inquiries (Figure 6) and telephone requests (Figure 7). These same forms could be used for the same purpose by the Educational Films Department

- the special registration cards used by Educational Films should be revised to add a space for indicating residence of registrant by county or Detroit. The department should have a new form for recording its daily registrations, both new and renewed, and for making a monthly summary of these (Figure 8).

When these forms are made available and carefully and completely used during the demonstration project according to the times suggested for special intensive study, the Detroit Public Library should be able to determine in some detail the extent of the use made of its many services in the Main Library and have a reliable report on the place of residence of its patrons within the six-county metropolitan area.

Chapter II

METHODS AND PROCEDURES FOR DETERMINING THE COST OF PATRON SERVICES

The purposes of Chapter II and Appendix A are to analyze the costs of patron services of the Detroit Public Library and to suggest any appropriate changes in the financial record keeping which may facilitate the determination of true costs of the patron services in the Main Library so as to provide a realistic and equitable basis for broadening the base of support of the Library.

The central task for analysis is to extract from the total costs of operation of the Library the distinct costs of operating each of the patron-serving departments included in the demonstration and to make certain that each of these departments' costs total bears its fair share of the general overhead costs of operations. This is to be done in such a way that the procedure can be applied to any future budget of the Library. A detailed analysis of the step-by-step procedure for determining these costs is contained in Appendix A, Sections A-1 through A-9, and an illustration of the application of this analysis to a sample yearly budget for the Detroit Public Library (artificially constructed for the purpose of the illustration, but approximating an actual yearly budget) is contained in the exhibits accompanying each section.

FACILITIES AND ORGANIZATION OF THE DETROIT PUBLIC LIBRARY

The physical facilities of the Detroit Public Library include the Main Library at 5201 Woodward Avenue, a service building housing part of the Maintenance Department, at 5828 Third Avenue; the Municipal Reference Library in the City-County Building; the Downtown Library, at 121 Gratiot; and 27 other branch libraries. Only services in the Main Library are to be open during the demonstration.

The Detroit Public Library is divided into ten main departments with each of them reporting directly to Administration, which consists of the Library's Director and Associate Director and their supporting staffs. The ten departments are:

Administration
Personnel
Business Management
Building Maintenance
Publications & Exhibitions
Book Selection
Catalog Department
Home Reading Services
Reference Services
Community & Group Services

Five of the above departments are further divided into sub-departments:

Business Management sub-departments:

Business Office
Purchasing Office
Stores Unit
Bindery
Printing Unit
Mail Room (Inter- and intra-library book transfers; mail clearings)

Building Maintenance sub-departments:

Carpentry
Painting
Grounds
Branch Library Maintenance
Main Library Maintenance
Miscellaneous Trades
Custodial Services

Catalog Department

Reference Cataloging
Home Reading Cataloging

Reference Services sub-departments:

Fine Arts
History and Travel
Municipal Reference
Automotive History
Switchboard Service
Business and Finance
Language and Literature
Philosophy, Religion, and Education
Rare Books
Sociology and Economics
Burton Historical Collection
Technology and Science
General Information and Biography
Music and Performing Arts
Service Bureau

Home Reading Services sub-departments:

- Children's Service
- Children's Library
- Young Adult Service
- Tabulation Machine Bureau
- Downtown Library
- 27 Branch Libraries
- Film Department
- Schools Department
- Loan and Registration Bureau
- Browsing Library
- Extension Service (at Utley Branch)

A reading of this list shows that some of these departments and sub-departments are among those included in the demonstration to be opened to direct service for patrons from throughout the metropolitan area. (See Introduction to this report for complete list of departments included.) Others, also serving patrons direct, are among those which are excluded from the demonstration. Still others do not serve patrons direct at all, but provide needed support to those departments which do provide direct patron service, whether or not among those included in the demonstration. The supporting departments provide general housekeeping services and professional services (such as cataloging) to the patron-serving departments both included and excluded from the demonstration project. To determine the true costs of the departments opened under the demonstration, however, the costs of supporting departments should be divided among the included and the excluded departments.

SERVICE COST DETERMINATION

A brief description of the cost structure of the Detroit Public Library should provide insight into the nature of costs to be expected. Based upon the 1966-67 fiscal year budget figures, approximately 69.5% of operating expenditures consist of salaries and wages, with an additional 13.8% for fringe benefits. Thus, approximately 83.3% of expenditures take the form of payroll costs. Books, periodicals, and film expenditures amount to about 6.9% of total expenditures. Maintenance supplies and utilities comprise about 7.4%. Binding supplies and expense and library and office supplies and expense make up about 1.8% of expenditures.

Two types of costs are relevant in this study. The budgeted costs, or predetermined costs, appear in the annual budget of the Library. These costs are based upon the best judgment of the business director of the Library before the beginning of each fiscal year, running from July 1 to June 30. The actual costs for any fiscal year, of course, can be determined only after the close of that year, and are the figures that appear in the appropriations accounts at that time. Actual costs never equal budgeted costs precisely but at the Detroit Public Library the two figures tend to be quite close. (For this reason it is suggested that at the close of the fiscal year when the actual service costs are known, adjustments required for the purposes of the demonstration be applied against the next year's budget estimates.)

To determine the annual operating cost for each of the services and departments of the Main Library opened during the demonstration a three-step procedure is followed. First, all the direct costs associated with each department and sub-department for the entire library should be determined. Direct cost, as used in this report, is defined as any significant cost associated with a particular department that would be eliminated if that department ceased operation (e.g., payroll costs). Second, since some departments provide supporting services to other departments, the supporting departments' costs are rightfully indirect costs of the department supported. All supporting departments' costs must be allocated on the basis of reasonable assumptions or calculations to the patron-serving departments including those opened under the demonstration. Third, the true cost for each patron-serving department will be the resulting total of direct and indirect costs assigned to that department.

Thus the determination of the costs of patron services included in the demonstration consists of the following tasks:

1) Determine the direct costs of every department and sub-department.

2) Allocate costs of the supporting departments to the patron-serving departments of the library system.

3) Deduct the appropriate share of internally generated revenues and separate the total costs of the excluded departments from the total costs of the included departments. The total costs of the included departments is the desired result.

A SUMMARY OF THE COST FORMULA

The detailed development of procedures for determining patron costs to be used in carrying out the three tasks mentioned on the preceding pages is described in Appendix A. The starting point for all the calculations is the annual budget of the Detroit Public Library. Sections A -1 through A -6 of Appendix A describe the steps and procedures used to determine the direct costs of each library department. Each section in Appendix A is illustrated with an exhibit on which figures drawn from a sample budget included in the Appendix have been entered. These sections cover the following:

- all salaries, wages, and fringe benefits, including the calculation of the fringe benefit application rate (A -1)
- the calculation and distribution of library and office supplies and expenses (A -2)
- the calculation and distribution of book, periodical, and film purchase costs (A -3)
- the calculation and distribution of telephone costs (A -4)
- the calculation and distribution of other direct costs which include various maintenance services and duties, care of equipment and grounds and buildings, insurance, and other specific services and materials (A -5). In the case of maintenance accounts, these are first allocated by building and then for the main building by department in Appendix A, Section A -8.
- a summary totaling the direct costs of sections one through five for all departments and sub-departments of the Library (A -6)

Section A -7 of Appendix A discusses, in detail, the miscellaneous revenues received by the Library and the special expense accounts which have earmarked corresponding offsetting revenue accounts. On these latter accounts, the expenditures are not permitted to exceed the earmarked revenues.

Section A -8 of Appendix A discusses the important task of selecting the supporting departments from the total list and allocating their costs among one another where applicable and eventually allocating these costs in the correct proportions to the patron-serving departments opened under the demonstration. Part of the supporting departments' costs apply to the library branches and other excluded departments and these must be deleted from the total costs divided among the departments included in the demonstration. The assumptions made and the reasoning behind the calculations and allocations of these supporting or indirect costs are described in detail.

Finally, section A-9 takes from the total cost figures for all departments those that apply to the departments included in the demonstration, deducts from them the appropriate share of the miscellaneous revenues described in section A-7, and reaches a total of the costs for the year.

The detailed discussion in the sections of Appendix A are based on Library operating revenue and expenditure accounts now in existence. From time to time specific accounts might be added to or deleted from the budget. Deletions will cause no problem for the amounts involved will not be entered in the formula. Additional accounts should cause little difficulty because the cost will probably fall within one of the broadly defined cost categories already described in Appendix A. The new costs can then be traced to the proper department or sub-department. In the event that a new department or sub-department is created, the exhibits in the Appendix should be modified accordingly to accommodate it. All associated direct costs can be calculated as for any other unit, and the new units' costs can be allocated to the patron-serving units as appropriate.

SOME CONCLUDING SUGGESTIONS FOR RELATING COSTS TO PATRON USE

Upon completing the tallies and analyses described in Chapter I and the preceding part of Chapter II and in Appendix A, the Detroit Public Library will be able to calculate, for each department providing patron service in the Main Library, the costs, both direct and supporting, for any given year. From these can be determined the total cost of providing patron services in the Main Library. The Library will have total figures for the year on the items circulated through:

- the Loan Bureau
- the Children's Library
- the Educational Films Department, and
- the Schools Department,

and reliable estimates, based on sampling, of the distribution of these items by place of residence of the borrowers. For its reference service departments and the Children's Library and Browsing Library, it will also have reliable estimates based on sampling,of the amount of time necessary to serve in-person and telephone patrons distributed according to place of residence of the patrons. The reference services and the provision of circulating materials are the largest parts of the total services provided by the departments in the Main Library.

These are not the only services, however. As mentioned in Chapter I, a sizeable proportion of patrons does not use the reference services and does not borrow materials to be taken home. Nevertheless, these patrons do use library facilities and collections on the premises, but do not use direct services of the staff. The existence and availability of major reference and research collections built up over many years and the provision of a place to use them, have, in themselves, a value to these patrons, albeit a value not possible to measure at present, even though the patron makes no use of library staff services. The only measurement proposed to include these patrons is the door count of all patrons during selected periods by place of residence. The library provides some of its services through Community and Group Services and related departments, such as Children's Services and Young Adult Services, mainly to community organizations and other group patrons, rather than to individual patrons, and it has been suggested that records be kept on these special services to groups.

The Library is faced with the task of relating the values of several kinds of service to each other and to the costs of providing these services. Given the information on costs and patron use of the Main Library, which will be collected during the demonstration project, the following procedure is suggested as one possible method for determining a fair and equitable distribution of the costs to support the opening of the Main Library as an institution providing free service to all residents of the six-county Detroit metropolitan area.

1) From the cost formula can be determined what part of the Library's total budget applies to the Main Library services opened during the demonstration. It is this part of the total budget to which the following steps apply.

2) A portion of the Main Library budget (perhaps 15 or 20 percent) might be contributed in recognition of its readiness to serve. This portion might be provided by the appropriate governmental units strictly in proportion to population. It would be contributed in recognition of the value of the existence of the library facilities and collections which are open to all residents of the area, whether registered at the library or not, and whether staff services are used or not.

(It was noted earlier that a substantial number of patrons use the library without being recorded as using particular services involving library staff.) This portion would be a percentage of the total cost of Main Library operations divided among the supporting units, including the City of Detroit, on the basis of population. This percentage might be fixed for a period of five years by agreement of the supporting units and then adjusted on the basis of new information. Consideration could be given to including in this calculation the costs of those library departments, such as Community and Group Services, which serve groups rather than individual patrons. The remainder of the budget would be apportioned on the basis of actual patron use, as indicated below.

3) For three departments (the Loan and Registration Bureau covering the general circulating collection, the Educational Films, and the Schools Department) the principal record of use kept by place of residence distribution is the number of items circulated. The total circulation of these should be distributed by place of residence according to the proportions found in the sample studied intensively during the demonstration. The costs of these three departments should be divided in accordance with the proportions of total items circulated to residents of each county and the City of Detroit.

4) For all the reference departments and for the Children's Library and Browsing Library a record will have been kept during the demonstration periods showing the time needed to serve patrons and distributed by the patron's place of residence. The proportion of costs allocated to each supporting unit including Detroit would be divided in accordance with the proportion of time their residents have used the several department's services.

Thus each governmental unit supporting the extension of services from the Main Library to all metropolitan residents would contribute a share made up of two parts: One part supports the Library's readiness to serve and is based on that unit's population proportion related to the total population of the six-county area, and a second part, which is a share of the patron use costs based on items borrowed and reference time used by patrons calculated in proportion to the heaviness of actual use stemming from the citizens of each participating governmental unit. It is assumed that the City of Detroit would continue to bear the heaviest share of these costs and in addition would continue to bear all the costs of operating that part of the Library excluded from the demonstration project.

This suggested approach can be illustrated by using a hypothetical case. Assume that the total annual budget for the Detroit Public Library is six million dollars ($6,000,000).

Step 1. From the cost analysis carried out by using the formula developed in Appendix A, assume that the total cost of Main Library services opened to all is found to be $2,720,000.

Step 2. Of this amount, assume that 20% or $544,000 is considered the readiness to serve cost, to be shared by the participating units on the basis of total population distribution. That leaves a remainder of $2,176,000 to be shared on the basis of patron use. Steps 3 and 4 for a County A are shown in the two tables following. County A's total contribution would be a portion of the readiness to serve cost determined on the basis of its population as a proportion of the total population of the participating government units plus the $92,730 determined as its share of the cost of the patron services opened to all library users based on the proportion of total use of these services by residents of County A. In the hypothetical case if the county's population were 5% of the total population of the six-county area it would pay $27,200 as its share of the cost of the Library's readiness to serve plus $92,730 on the basis of measured use.

Step 3.

Department	Total Cost to Be Shared on Basis of Patron Use	Total Items Circulated	Average Cost per Item Circulated	Number of Items Borrowed by Residents of County A	Total Cost of Items Borrowed by Residents of County A
Loan and Registration	$104,000	515,000	$ .20	25,000	$ 5,000
Educational Films	56,000	20,000	2.80	1,500	4,200
Schools Department	72,000	105,000	.69	7,000	4,830
Total Step 3	$232,000				$14,030

Step 4.

Department	Total Cost to Be Shared on Basis of Patron Use	Total Minutes of Patron Use	Average Cost per Minute	Number of Minutes Used by Residents of County A	Total Cost of Minutes Used by Residents of County A
Children's Library	$ 80,000	240,000	$.33	15,000	$ 4,950
Browsing Library	128,000	216,000	.59	10,000	5,900
Fine Arts	120,000	198,000	.61	5,000	3,050
Language and Literature	140,000	400,000	.35	20,000	7,000
Music and Performing Arts	124,000	480,000	.26	5,000	1,300
Technology and Science	316,000	1,050,000	.32	60,000	19,200
Automotive History	20,000				
Sociology and Economics	196,000	960,000	.20	30,000	6,000
Philosophy, Religion, and Education	140,000	560,000	.25	10,000	2,500
Business and Finance	112,000	600,000	.19	20,000	3,800
History and Travel	160,000	231,000	.69	10,000	6,900
General Information and Biography	188,000	600,000	.31	30,000	9,300
Burton Historical	172,000	432,000	.40	18,000	7,200
Rare Books	48,000	120,000	.40	4,000	1,600
Total Step 4	$1,944,000				$78,700
Total Steps 3 and 4	$2,176,000				$92,730

Using this procedure, the City of Detroit would contribute all of the costs of the library outside the Main Library, a portion of the readiness to serve cost of the Main Library based on the city's population, and its fair share of remaining reference and circulating costs based on use by its residents. The other participating governments would contribute a portion of the readiness to serve cost of the Main Library based on population and a fair share of remaining reference and circulating costs based on use of these services by their residents.

APPENDIXES

Appendix A

DEVELOPMENT OF FORMULA FOR DETERMINING COST OF PATRON SERVICES

The purpose of Appendix A is to present the detailed development of the cost formula used to determine the costs of each department and sub-department of the Detroit Public Library with particular attention given to those patron-serving departments which will be open to all residents of the six-county Detroit metropolitan region during the demonstration project. The appendix is divided into nine major sections providing a step-by-step discussion of the development of the formula and the reasoning behind each step. Sections A-1 through A-5 are concerned with the direct costs of each library department and section A-6 provides a summary of the first five and thus the total of direct costs. Section A-7 analyzes the library's offset accounts and miscellaneous revenues. Section A-8 provides a detailed discussion of the bases and reasoning for the allocation of supporting department costs among other departments including those serving patrons. Section A-9 summarizes the relevant costs for the departments included in the demonstration project.

To illustrate the formula in actual use a sample budget, Exhibit A, has been constructed. It should be stressed that the budget used in the illustration is only a sample. While it is the approximate size of the current budget it has been deliberately constructed as a general illustration and does not represent the actual costs of any particular fiscal year.

Two additional exhibits give information needed for the application of the sample budget. One of these is the floor area of each of the main buildings and of each of the departments used in the illustration. The floor areas in square feet appear in Exhibit A-10. A separate calculation of a rate for allocating purchases and stores is also needed, as will be seen in the section discussions; this step is illustrated in Exhibit A-11. These two exhibits appear at the end of this appendix.

In the following sections and exhibits two terms have been introduced which need further clarification.

1. In five departments (Business Management, Maintenance, Catalog Department, Reference Services, and Home Reading Services) there has been added for the purpose of this analysis a sub-department which does not appear in the library's organization chart. This sub-department in each case is the name of the department with the word

"administration" added. Subsumed under this classification are the director or coordinator of the department along with his supporting staff. For example, the sub-department "Business-Administration" includes the business director, assistant business director, and secretary plus associated supplies and expenses.

2. The sub-departments of Maintenance have been regrouped. Painting, Carpentry, and part of Miscellaneous Trades are here designated "Service Building Staff," since the personnel involved work primarily in the Service Building. The Main Library Maintenance, Grounds, Custodial Services, and remainder of Miscellaneous Trades are here designated "Main Library Maintenance," since the personnel involved work primarily at the Main Library building.

The purpose of the two changes is to facilitate the costing process. By making the changes it becomes possible to classify easily all personnel according to the type of activity in which they are engaged. No implications for reorganization are intended.

The supporting departments and sub-departments discussed in the nine sections of Appendix A are the following:

Departments

- Administration
- Personnel
- Publications and Exhibits
- Book Selection

Sub-departments

From Business Management:

- Business-Administration
- Business Office
- Purchasing Office
- Stores Unit
- Bindery
- Printing Unit
- Mail Room (Inter- and Intra-library book transfers; mail clearing)

From Maintenance:

- Maintenance Administration
- Service Building Staff
- Main Library Maintenance
- Branch Library Maintenance

From Catalog Department:

- Catalog Administration
- Reference Services Cataloging
- Home Reading Services Cataloging

From Reference Services:

- Reference Services Administration
- Switchboard Service
- Service Bureau

From Home Reading Services:

- Home Reading Services Administration
- Loan and Registration Bureau
- Tabulating Bureau
- Children's Service
- Young Adult Service

Exhibit A

SAMPLE LIBRARY BUDGET

Library Fund

5610	Administration:	
111	Salaries	
	A - General Administration (9)	$ 101,500
	B - Business Office (13)	92,500
	C - Personnel Office (4)	34,000
	Total (26)	$ 228,000

5620	Maintenance - Buildings and Grounds:	
111	Salaries	
	A - Administrative Supervision (3)	$ 29,000
	B - Building Operation and Repair (25)	193,100
	C - Janitorial (48)	267,000
	D - Custodial (8)	45,000
	E - Automotive Equipment Operation (5)	30,500
	Total (89)	$ 564,600
121	Wages (7)	38,000
252	Protection Service	20,000
305	Repairs and Replacements	23,500
307	Auto Maintenance	4,500
309	Janitor Supplies	7,000
360	Elevator Maintenance	12,021
361	Contractual Coat Rental	3,000
362	Building Cleaning Service	141,000
364	Care of Grounds	4,000
366	Maintenance of Lighting	7,000
390	Major Repairs - Buildings and Grounds	8,000
401	Heating and Air Conditioning Services	65,500
402	Light and Power	130,000
409	Utility Service and Fuel	25,250
413	Private Car Rental	2,300
414	Rental of Buildings and Space	2,700
501	Equipment	3,000
		$1,061,371

5630	Binding Services:	
111	Salaries	
	A - General Administration (2)	$ 15,200
	B - Binding (20)	125,800
	C - Mending and Gilding (4)	21,800
	Total (26)	$ 162,800
301	Supplies and Expense	30,700
374	Contract Binding	23,000
		$ 216,500

5640	Clerical Services:	
111	Salaries	
	A - Reference Services (28)	$ 151,700
	B - Home Reading Services (76)	393,000
	C - Book Selection and Cataloging (36)	189,000
	D - Book Loan Activities (27)	141,200
	E - Printing and Exhibits (7)	42,700
	F - Business Activities	72,000
	Total (186)	$ 989,600
121	Wages	
	A - Reference Services (32)	$ 112,000
	B - Home Reading Services (77)	231,000
	C - Book Selection and Cataloging (2)	6,000
	D - Book Loan Activities (3)	10,500
	E - Business Activities (4)	12,000
	Total (118)	$ 371,500
	Total (304)	$1,361,100

5650	Professional Services:	
111	Salaries	
	A - Reference Services (76)	$ 637,000
	B - Home Reading Services (169)	1,423,300
	C - Book Selection and Cataloging (23)	194,700
	D - Special Services (3)	29,500
	Total (271)	$2,284,500
142	Sunday Service	55,800
304	Postage	17,000

5650 Professional Services: (continued)

370	Periodicals	$ 42,500
372	Library and Office Supplies	42,000
373	Microfilming	750
374	Audio-Visual Materials	10,500
381	Book Purchases	408,631
405	Telephone and Telegraph	30,651
411	Rental of Office Equipment	9,000
		$2,901,332

5690 Unallocated:

150	Unused Sick Leave	$ 6,000
160	Longevity Pay	41,000
362	Television Programs	2,000
374	Acquisition and Recruiting Expense	1,400
383	Purchase of Rental Books and Records	19,000
384	Purchases by Gift	2,000
385	Replacement of Lost and Damaged Books	10,000
387	Purchase of Printed Matter for Sale	3,700
388	Purchases from Service Receipts	700
496	Workmen's Compensation	500
501	Library and Office Equipment	6,000
502	Building Equipment	1,250
503	Typewriters	5,015
610	Contingencies	3,400
713	Payments to Actuarial Pension Funds	511,095
714	Payments — Non-Actuarial Pension Fund	21,886
721	Group Insurance — Death	12,230
722	Group Insurance — Hospitalization	75,167
723	Federal Old Age and Survivor's Benefits	123,000
724	Group Life Insurance	2,500
	Total	$ 847,843
	Total Operations and Maintenance (723)	$6,616,146

Credits

3203	Library Fines	$ 148,000
4410	Book Rentals	11,000
4411	Record Rentals	8,000
5551	Court Fines	158,000
5570	State Aid	308,500
5611	Gifts — Budgeted	2,000

Credits
(continued)

6215	Lost and Damaged Books	$ 10,000
6442	Sale of Printed Material	11,000
6542	Library Non-Resident Fees	3,200
6548	Service Receipts — Other Units of Government	700
6714	OCD Service Reimbursement	750
7506	Dividend — Group Life Insurance	1,850
9900	Other Revenue	6,000
		$ 669,000
	Amount to be financed by Detroit and the parties concerned (equals difference between credits and total operations and maintenance costs above)	5,947,146
	Total Credits	$6,616,146

Appendix A-1

FRINGE BENEFIT APPLICATION RATE CALCULATION

Next to salaries and wages, fringe benefits comprise the largest expense item of the Detroit Public Library. The best measure of the behavior of fringe benefit costs is the sum total of all salary and wage costs. That is to say, in general, as the total of salary and wage costs increases, total fringe benefit costs will increase. Thus, it is reasonable to apply fringe benefit costs to all departments and sub-departments in proportion to the amount of salary and wage costs applicable to each unit. To facilitate this, the fringe benefit application rate should be computed, as discussed in Step 1 in the text of this report.

Three things must be done:

1. All salaries and wages must be computed. This task is quite straightforward with the help of the annual budget, except for one item. That item is budget account 5650-142-Sunday Service which provides for salaries and wages of personnel working on the Sundays during which the Main Library is officially open. Refer to Exhibit A-1 for a convenient calculation sheet for totaling salary and wage costs.

2. All fringe benefit costs must be computed. Fringe benefit costs are costs for employee insurance, pensions, sick leave, social security and similar items. Refer to Exhibit A-1 for the current list of fringe benefit items. Any income associated with fringe benefit outlays should be deducted from the fringe benefit total. Currently, there is only one such item, budget account 7506-Dividend-Group Life Insurance.

3. The fringe benefit application rate may now be computed. Net fringe benefits (Total B) should be divided by total salary and wage costs (Total A). This rate is in dollars-per-dollar, and should be rounded to five decimal places. The reason for the five decimal place calculation is to provide accuracy to the nearest ten dollars when multiplying by a seven-digit number. For example $1,000,000 x .19667 $/$ = $196,670, which is accurate to within five dollars.

After each department and sub-department is charged with the appropriate salary and wage costs, the fringe benefit costs applicable to each unit are calculated by muliplying the application rate times the salary and wage costs of that unit. All salary, wage, and fringe benefits applied should be entered into the appropriate columns in Exhibit A-4 of Appendix A-4 and Exhibit A-6 of Appendix A-6. Care must be taken in moving salary and wage costs into Exhibits A-4 and A-6 from Exhibit A-1:

1. Note that Exhibit A-1 contains accounts that are classified by employee function (e. g. , administrative, clerical), while Exhibits A-4 and A-6 require salaries and wages to be assigned by department and sub-department. For example, 5610-111-A-Administration contains the salaries of, among others, the Library Director and the Reference Services Director. The salary of the Library Director should be assigned to Administration in Exhibit A-6 while the salary of the Reference Services Director must be assigned to Reference Services-Administration. Supporting secretarial salaries should be assigned to the appropriate category along with the respective director's salary.

2. The account 5650-142-Sunday Service must be assigned to those units incurring the costs. Hence, the overtime paid to a librarian to staff Technology and Science, for example, should be charged to that department. All of the 5650-142 account must be assigned to the Main Library units as appropriate.

3. The total of salaries and wages as indicated by Total A in Exhibit A-1 must agree with the total of salaries and wages in column 2 of Exhibit A-6, when the salary costs posted to Exhibit A-4 are added.

Calculation of fringe benefit costs for each library unit should be computed next by multiplying the wages and salaries for each unit by the application rate. The total fringe benefits allocated must equal the total fringe benefits budgeted. Hence, the amount indicated in Exhibit A-1 must equal the total in column 3 of Exhibit A-6, when the fringe benefit costs posted to Exhibit A-4 are included. The small rounding errors that are bound to occur due to the use of the application rate should be adjusted to make the totals agree.

Note that "turnover" adjustments have been neglected; any turnover savings will be reflected in the actual cost figures for a given fiscal year.

Exhibit A-1

FRINGE BENEFIT APPLICATION RATE CALCULATION

Budget Account	Budget Classification Salaries and Wages:	Amount
5610 111	A - General Administration	$ 101,500
	B - Business Office	92,500
	C - Personnel Office	34,000
5620 111	A - Administrative Supervision	29,000
	B - Building Operation and Repair	193,100
	C - Janitorial	267,000
	D - Custodial	45,000
	E - Automotive Equipment Operation	30,500
121	Wages	38,000
5630 111	A - General Administration	15,200
	B - Binding	125,800
	C - Mending and Gilding	21,800
5640 111	A - Reference Services	151,700
	B - Home Reading Services	393,000
	C - Book Selection and Cataloging	189,000
	D - Book Loan Activities	141,200
	E - Printing and Exhibits	42,700
	F - Business Activities	72,000
121	A - Reference Services	112,000
	B - Home Reading Services	231,000
	C - Book Selection and Cataloging	6,000
	D - Book Loan Activities	10,500
	E - Business Activities	12,000
5650 111	A - Reference Services	637,000
	B - Home Reading Services	1,423,300
	C - Book Selection and Cataloging	194,700
	D - Special Services	29,500
142	Sunday Service	55,800
	Total A	$4,694,800

Budget Account	Budget Classification Fringe Benefits:	Amount
5690-150	Unused Sick Leave	$ 6,000
160	Longevity Pay	41,000
496	Workmen's Compensation	500
713	Payments to Actuarial Pension Funds	511,095
714	Payments - Non-Actuarial Pension Funds	21,886
721	Group Insurance - Death	12,230
722	Group Insurance - Hospitalization	75,167
723	Federal Old Age and Survivor's Benefits	123,000
724	Group Life Insurance	2,500
	Sub-total	$793,378
	Less: Associated Deductions	
7506	Dividend - Group Life Insurance	1,850
	Total B	$791,528

FRINGE BENEFIT APPLICATION RATE CALCULATION:

$$\text{Rate} = \frac{\text{Total B}}{\text{Total A}} = \frac{\$791,528}{\$4,694,800}$$

= .16860 dollars per dollar

Rounded to the fifth decimal place

Appendix A-2

LIBRARY AND OFFICE SUPPLIES AND EXPENSE CALCULATION AND DISTRIBUTION

At the present time, library and office supplies and expense consists of those budget items listed in the columns of Exhibit A-2. The individual totals listed in line 1 of that exhibit must be apportioned among the departments and sub-departments listed in the rows of that exhibit. The total of library and office supplies and expense for each department and sub-department is then computed by summing across. The resulting totals should be entered as appropriate into Exhibit A-6. The apportioning of specific accounts is discussed below.

5650-304 Postage

Much of postage costs at the library comes from transportation charges for book purchases, and consequently comes out of the book budgets. The costs associated with this particular account, however, are most associated with specific units for postage other than transportation charges on book purchases. An occasional check should be made to provide a basis for estimating the amount of postage used by each unit. Most postage costs will be assignable to Loan and Registration and Tabulating, and some to Publications and Exhibits and other units. The appropriate amounts should be entered into Exhibit A-2.

5650-372 Library and Office Supplies

To obtain these supplies, in most instances, a unit must fill out a requisition form and present it to Stores. Ordinarily this is done monthly. While these requisition forms could be costed each time one is presented, the computational effort required would probably necessitate the hiring of additional personnel. Consequently, it is suggested that the forms be costed for each department and sub-department for a selected month once a year.

The large items not covered by requisition forms are printing supplies, bus tickets issued to employees for travel to branches, tabulating cards, and catalog cards of various types.

The procedure for the distribution of Library and Office Supplies, then, should be to:

1. assign costs not covered by requisition forms to the appropriate units. For example, printing supplies should

be charged to Printing Unit, bus tickets to Branch Maintenance or 27 Branch Libraries, tabulating cards and supplies to Tabulating Bureau, and catalog cards to Catalog Department.

2. take the remaining costs (i. e. , total amount net of items in 1 above) and apply the percentages calculated from the sample of costed requisition forms. The month selected for the sample should be representative of the average level of operations of the library. The business director has advised that March, April, or May would be appropriate. All computed costs should be entered into column 3 of Exhibit A-2 as appropriate.

5650-411 Rental of Office Equipment

The bulk of this account is assignable to Tabulating Machine Bureau for the rental of data processing equipment used to control circulation. Other departments to which the remainder of this account accrues are indicated in the budget request summary as modified by the approved budget appropriations. Cost items should be entered as appropriate in Exhibit A-2.

5690-501 Library and Office Equipment

This account will vary widely in size from year to year. Different units each year will have different amounts applicable to them. Information as to the handling of the account is available in the annual budget request summary as modified by the approved budget appropriations. Cost items should be entered as appropriate in Exhibit A-2.

5690-503 Typewriters

Typewriters are replaced according to a prescribed schedule. The units receiving new typewriters in any given year are identified in the annual budget request summary as modified by the approved budget appropriations. Items should be entered in Exhibit A-2.

With all five budget accounts appropriately distributed, the total for each unit should be computed by summing across the columns. The final totals in column 1 should be entered into Exhibit A-6 in Appendix A-6.

Exhibit A-2

LIBRARY AND OFFICE SUPPLIES AND EXPENSE CALCULATION AND DISTRIBUTION

Calculation:	1 Total	2 5650-304 Postage	3 5650-372 Library & Office Supplies	4 5650-411 Rental of Office Equipment	5 5690-501 Library & Office Equipment	6 5690-503 Type-writers
Total	$79,015	$17,000	$42,000	$9,000	$6,000	$5,015
Distribution:						
Administration	265	100	165			
Personnel	320	50	165			105
Business Management						
- Administration	-0-					
- Business Office	1,275	1,000	165			110
- Purchasing Office	165		165			
- Stores	260		165			95
- Bindery	165		165			
- Printing Unit	3,317		3,215			102
- Mail Room	165		165			
Maintenance						
- Administration	50	50				
- Service Building Staff	165		165			
- Main Library Maintenance	268		165			103
- Branch Library Maintenance	3,365		3,365			
Publications and Exhibits	9,290	4,000	5,165			125
Book Selection	1,952	1,500	165			287
Catalog						
- Administration						
- Reference Services Cataloging	5,923		5,165			758
- Home Reading Services Cataloging	3,165		3,165			
Home Reading Services						
- Administration	215	50	165			
- Loan and Registration	260		165			95
- Tabulating	28,755	10,000	9,665	9,000		90
- Children's Service	165		165			
- Young Adult Service	165		165			
- Extension Service	165		165			
- 27 Branch Libraries	7,106		4,320		1,460	1,326
- Downtown Library	355		165			190
- Children's Library	165		165			

Exhibit A-2
(continued)

	1	2	3	4	5	6
		5650-304	5650-372	5650-411	5690-501	5690-503
	Total	Postage	Library & Office Supplies	Rental of Office Equipment	Library & Office Equipment	Typewriters
Home Reading Services (continued)						
- Young Adult Library						
- Browsing Library	$ 278		$ 165			$ 113
- Schools Department	165		165			
- Film Department	1,527		1,365		$ 162	
Reference Services						
- Administration	215	$ 50	165			
- Switchboard (Posted to Exhibit B-4)	275		165			110
- Service Bureau	285		165			120
- Music and Performing Arts	1,584		965		524	95
- Language and Literature	277		165			112
- Fine Arts	605		165		345	95
- Rare Books	165		165			
- Technology and Science	620		165		265	190
- Automotive History						
- Philosophy, Religion, and Education	165		165			
- Business and Finance	495		165		240	90
- History and Travel	2,994		165		2,734	95
- General Information and Biography	265		165			100
- Burton Historical	359		165			194
- Sociology and Economics	535		165		270	100
- Municipal Reference Library	165		165			
Community and Group Services	580	200	165			215
Total	$79,015	$17,000	$42,000	$9,000	$6,000	$5,015

Appendix A-3

BOOK, PERIODICAL, AND FILM PURCHASE COSTS CALCULATION AND DISTRIBUTION

The costs of acquisitions of books, periodicals, and films may be determined with little difficulty. The four relevant accounts are listed in the columns of Exhibit A-3. The handling of each is discussed below. The data were obtained from 1965-66 records, with an assumption made as to the total periodical costs. Records available did not indicate the book budget of Automotive History. Consequently, that amount is included in Technology and Science. Since Burton Historical has a separately funded book budget, no costs are assigned to that unit. For convenience microfilming is assigned to General Information and Biography.

5650-370 Periodicals and 5650-381 Book Purchases

The budget for books and periodicals is determined annually and divided between Home Reading Services and Reference Services. Each of these two departments further subdivides its allotment among the various sub-departments. Thus, the amount applicable to each sub-department is obtainable from the directors of Home Reading Services and Reference Services. Appropriate amounts should be entered in Exhibit A-3.

5650-373 Microfilming

This expense will probably grow many fold in future years with advances in microfilm and microfiche technology. Presently, the entire amount is assignable to Reference Services. The director of Reference Services allocates this amount to the various sub-departments and has available the necessary information. Appropriate amounts should be entered in Exhibit A-3.

5650-374 Audio-Visual Materials

This account applies only to the Film Department under Home Reading Services.

With the distribution of all of the above items complete, the respective cost associated with each sub-department is computed by summing horizontally. The totals in column 1 of Exhibit A-3 should then be entered as appropriate in Exhibit A-6.

Exhibit A-3

BOOK, PERIODICAL, AND FILM PURCHASE COSTS CALCULATION AND DISTRIBUTION

Calculation:	1 Total	2 5650-370 Periodicals	3 5650-373 Microfilming	4 5650-374 Audio-Visual Materials	5 5650-381 Book Purchases
Total	$462,381	$42,500	$750	$10,500	$408,631
Distribution:					
Reference Services			750	-0-	
Home Reading Services			-0-	10,500	
Total	$462,381	$42,500	$750	$10,500	$408,631
By Sub-department:					
Reference Services					
- Music and Performing Arts	8,940	1,071			7,869
- Lang. and Lit.	14,874	820			14,054
- Fine Arts	12,371	1,627			10,744
- Rare Books	2,350				2,350
- Technology and Science	43,336	16,532			26,804
- Automotive History					
- Philosophy, Religion, and Education	10,887	1,636			9,251
- Business and Finance	11,220	1,990			9,230
- History and Travel	11,838	1,073			10,765
- General Information and Biography	13,996	2,672	750		10,574
- Burton Historical	-0-				-0-
- Sociology and Economics	22,631	3,721			18,910
- Municipal Reference Library	3,677	1,422			2,255

Exhibit A-3
(continued)

	1 Total	2 5650-370 Periodicals	3 5650-373 Microfilming	4 5650-374 Audio-Visual Materials	5 5650-381 Book Purchases
Home Reading Services					
- Children's Library	$ 5,834				$ 5,834
- Browsing and Young Adult Library	15,648				15,648
- Schools Department	4,210				4,210
- Film Department	10,500	-0-	-0-	$10,500	-0-
- Extension Service	contained in 27 Branch Libraries				
- 27 Branch Libraries	270,069	$ 9,936	-0-	-0-	260,133
- Downtown Library	contained in 27 Branch Libraries				
Total	$462,381	$42,500	$750	$10,500	$408,631

Appendix A-4

TELEPHONE COSTS CALCULATION AND DISTRIBUTION

The calculation of telephone costs is facilitated by taking budget account 5650-405-Telephone and Telegraph, and adding to this figure salary and fringe benefit costs associated with the staffing of the switchboard at the Main Library. A convenient analysis form is provided in Exhibit A-4. A discussion of the distribution of telephone costs follows.

Telephone costs consist of (1) rentals paid to the telephone company, (2) payroll costs associated with the staffing of the switchboard, and (3) long distance and excess-calls charges. The rental costs associated with the various branches are readily obtained from actual data from the previous year, and can be used as a basis for estimation for the next year. The total charges for the Main Library should be divided pro rata on the basis of number of telephone lines in each unit in the Main Library.

Payroll, long distance and excess-calls charges, and supplies costs associated with staffing the switchboard should be split pro rata among the patron service-providing departments and sub-departments of the Main Library on the basis of number of telephone lines in those units. Thus, if there are 40 telephone lines in the patron service-providing units, and sub-department Y has four telephone lines, sub-department Y is charged with 10% of telephone payroll and other costs. Exhibit A-4 indicates with an "X" the patron-serving sub-departments.

The allocation assumption for the rental fees associated with the Main Library is that rental fees behave in approximate proportion as the number of telephone lines in use. For payroll costs the assumptions are (a) the bulk of incoming calls are for information from one or more patron-serving units, and (b) on the average, the more calls a unit gets, the more telephone lines it will have. No material error should result in cost calculation if the above allocation bases are used. Operationally, one need keep track of (1) total telephone lines in the Main Library, and (2) telephone lines in each unit in the Main Library.

Since some telephone lines in the Service Building are run through the main switchboard, these lines should bear a share of rental costs. A current library telephone directory will facilitate computations.

√

With distribution to units complete, the totals for each unit should be computed by adding horizontally. The totals should be entered as appropriate in Exhibit A-6 of Appendix A-6.

Exhibit A-4

TELEPHONE COSTS CALCULATION AND DISTRIBUTION

Budget Account			1 Total	2 Equipment Rental	3 Payroll, Supplies, and Long Distance Charges
5650 405	Telephone and Telegraph		$30,651	$25,719	$ 4,932
	Salaries and Wages		11,000		11,000
	Fringe Benefits @ .16860 $/$		1,854		1,854
	Library and Office Supplies (from Exhibit A-2)		275		275
	Total		$43,780	$25,719	$18,061
	Distribution:	# Lines			
	Administration	5	$ 624	$ 624	
	Personnel	3	375	375	
	Business Management				
	- Administration	1	124	124	
	- Business Office	3	375	375	
	- Purchasing	1	124	124	
	- Stores	1	124	124	
	- Bindery	2	249	249	
	- Printing Unit	1	124	124	
	- Mail Room	2	249	249	
	Maintenance				
	- Administration	1	124	124	
	- Service Building	3	375	375	
	- Main Library Maintenance	17	2,130	2,130	
	- Branch Library Maintenance	-		(Incl. in 27 B. L.)	
	Publications and Exhibits	2	249	249	
	Book Selection	5	624	624	
	Catalog				
	- Administration	1	124	124	
	- Reference Services Cataloging	1	124	124	
	- Home Reading Services Cataloging	1	124	124	

Exhibit A-4
(continued)

Budget Account	# Lines	1 Total	2 Equipment Rental	3 Payroll, Supplies, and Long Distance Charges
Home Reading Services				
- Administration	2	$ 249	$ 249	
- Loan and Registration	17	2,129	2,129	
- Tabulating	1	124	124	
- Children's Service	1	124	124	
- Young Adult Service	1	124	124	
- Extension Service	-		(Incl. in 27 B. L.)	
- 27 Branch Libraries	-	7,743	7,743	
- Downtown Library	-		(Incl. in 27 B. L.)	
- Children's Library	x 4	1,561	499	$ 1,062
- Browsing and Young Adult Libraries	x 3	1,172	375	797
- Schools Department	x 2	780	249	531
- Film Department	x 3	1,172	375	797
Reference Services				
- Administration	2	249	249	
- Service Bureau	2	249	249	
- Music and Performing Arts	x 3	1,172	375	797
- Language and Literature	x 4	1,561	499	1,062
- Fine Arts	x 4	1,561	499	1,062
- Rare Books	x 3	1,172	375	797
- Technology and Science	x 6	2,344	749	1,595
- Automotive History	x 2	780	249	531
- Philosophy, Religion, and Education	x 4	1,561	499	1,062
- Business and Finance	x 4	1,561	499	1,062
- History and Travel	x 5	1,952	624	1,328
- General Information and Biography	x 9	3,513	1,123	2,390
- Burton Historical	x 6	2,344	749	1,595
- Sociology and Economics	x 4	1,561	499	1,062
- Municipal Reference Library	-		(Incl. in 27 B. L.)	
Community and Group Services	x 2	780	249	531
Total	144	$43,780	$25,719	$18,061
	x68			

Appendix A-5

OTHER DIRECT COSTS CALCULATION AND DISTRIBUTION

Most other direct costs not considered in Appendixes A-2 through A-4 are traceable to some sub-department of Maintenance. These are listed in Exhibit A-5. Each account will now be discussed.

5620-252 Protection Service

This account covers protection service contracted for with a private concern, and applies only to the branch libraries. It should be assigned to Branch Maintenance in Exhibit A-5.

5620-305 Repairs and Replacements

This account covers various repairs and replacements of library facilities and equipment. The amount will vary significantly in size from year to year. The details of what is to be repaired and replaced are delineated in the annual budget request summary as modified by approved budget appropriations. Costs are thus traceable to units incurring the costs. Entries should be made in Exhibit A-5.

5620-307 Auto Maintenance

This account covers gasoline, oil, and repair expenses for the vehicles owned or used by the library. Vehicles include bookmobiles and maintenance equipment. Allocation is difficult on any basis other than estimate. The Maintenance Director has indicated about one-third of this account should be allocated to Main Library Maintenance, and the rest to Branch Library Maintenance. Entries should be made in Exhibit A-5.

5690-504 Automotive Equipment

This account will vary widely from year to year. The account covers replacement of library-owned vehicles. Typically, the item applies to maintenance in one way or another. Necessary information can be obtained from the annual budget request summary as modified by allowed appropriations. The amount should be entered as appropriate in Exhibit A-5, and in Exhibit A-6 if ever necessary.

5620-309 Janitor Supplies

This account should be allocated among Service Building, Branch Library Maintenance and Main Library Maintenance in proportion to the floor space occupied by the branches and the Main Library building. Floor space of the Main Library is approximately 410,000 square feet; of the branches, approximately 320,000 square feet; of the Service Building, approximately 27,500 square feet. Thus, $\frac{410,000}{757,500}$ of the amount should be allocated to Main Library Maintenance. The allocation assumption implicit in the above is that the greater the floor space, the greater will be the need for janitorial supplies. Entries should be made in Exhibit A-5.

Within the Service Building is the Bindery, as well as Stores and the Service Building shops. The floor area of the Bindery is 8,722 square feet; of the Stores unit, 3,584 square feet. Hence, of the amount of this account assigned to the Service Building, $\frac{8,722}{27,500} = 31.7\%$ should be assigned to the Bindery unit; $\frac{3,584}{27,500} = 13\%$ should be assigned to the Stores unit. The same procedure should be taken with 5620-366-Maintenance of Lighting, and 5620-402-Light and Power.

5620-360 Elevator Maintenance

This account should be divided between Branch Library Maintenance and Main Library Maintenance on the basis of prediction from the annual budget request summary. Most of this account is applicable to the Main Library. Entries should be made in Exhibit A-5.

5620-362 Building Cleaning Service

This account covers contractual agreement with a private maintenance concern. The entire amount is applicable to Main Library Maintenance, and should be so entered in Exhibit A-5.

5620-364 Care of Grounds

This account covers supplies necessary for grounds care. It should be divided between Branch and Main Library Maintenance on the basis of grounds areas. Presently, grounds areas are approximately 200,000 square feet at the Main Library and 236,000 square feet at the branches. Thus $\frac{200,000}{436,000}$ of this amount should be charged to Main Library Maintenance. Entries should be made in Exhibit A-5.

5620-366 Maintenance of Lighting

This account should be split among the Service Building, and the Branch and Main Library Maintenance on the basis of floor areas. Refer to the handling of 5620-309-Janitor Supplies. Entries should be made in Exhibit A-5.

5620-390 Major Repairs—Buildings and Grounds

This account will vary widely in size from year to year. Most of this account will usually apply to the branches, since the Main Library was recently renovated. The annual budget request summary as modified by approved appropriations will indicate whether amounts should be charged to Service Building, Branch, or Main Library Maintenance in Exhibit A-5.

5620-401 Heating and Air Conditioning Services

This account can be divided among Branch and Main Library Maintenance and Service Building on the basis of estimates obtained from the annual budget request summary. Entries should be made in Exhibit A-5.

5620-402 Light and Power

This account can be divided among Branch and Main Library Maintenance and Service Building on the basis of estimates from past experience. Refer to the handling of 5620-309-Janitor Supplies. Entries should be made in Exhibit A-5.

5620-409 Utility Service and Fuel

This account covers gas purchases and service for various branches. The entire amount applies to Branch Library Maintenance, and should be so entered in Exhibit A-5.

5620-413 Private Car Rental

This account should be assigned to the various units utilizing the rented automobile. Information as to the assignment of cost can be obtained from the annual budget request summary, where estimated mileage to be used by various units is presented. Assignments should be made pro rata on the basis of mileage budgeted for the respective units. The library investigator uses some 40% of the mileage, for example, and that percentage should be charged to Loan and Registration of Home Reading Services. Appropriate entries can be made in Exhibit A-5 for Service Building, Branch, and Main Library Maintenance, with notations for the remaining amount made in the same row. The remaining amount should be entered immediately into Exhibit A-6.

5620-414 Rental of Building and Space

This account covers rental of branch library buildings and should be charged in its entirety to Branch Library Maintenance in Exhibit A-5.

5620-450 Uniform Allowance

This account covers uniform costs of various maintenance personnel employed at the Main Library. The entire amount should be charged to Main Library Maintenance, and so entered in Exhibit A-5.

5620-501 Equipment

This account will vary in size from year to year, and the amount should be assigned to the appropriate maintenance sub-department.

5690-502 Building Equipment

This account will also vary in size from year to year. The same procedure for handling this account as used for 5620-501 is recommended. Items should be entered in Exhibit A-5.

With the above calculations complete, totals A in Exhibit A-5 can be computed and inserted in Exhibit A-6. The handling of the remaining non-maintenance direct costs is now discussed. Note that although 5620-361-Contractual Coat Rental is classified as a maintenance item in the budget, it does not apply to maintenance as discussed in this report.

5620-361 Contractual Coat Rental

This account covers the rental of coats for the pages, and should be assigned to Reference Services—Service Bureau. The amount should be entered in Exhibit A-5 and immediately in Exhibit A-6.

5630-301 Supplies and Expense

This account applies entirely to the Bindery sub-department of Business Management, and should be so noted in Exhibit A-5.

5630-374 Contract Binding

This account applies entirely to the Bindery, also, and should be so noted in Exhibit A-5. The total of 5630-301 and 5630-374 should be entered immediately in Exhibit A-6.

5690-362 Television Programs

This account applies to Community and Group Services and should be so noted in Exhibit A-5 and entered immediately thereafter in Exhibit A-6.

5690-374 Acquisition and Recruiting Expense

The account applies in its entirety to Personnel for staff recruitment purposes. This fact should be so noted in Exhibit A-5, and the amount should be entered immediately in Exhibit A-6.

5690-495 Insurance — Book Collections

This account covers insurance protection on the Burton Historical Collection, Automotive History, and the Rare Book Collection. It should be allocated among these three sub-departments of Reference Services. The recommended breakdown is Burton, 55%; Automotive History, 15%; Rare Books, 30%. The basis for the breakdown is approximate relative values of the collections. Entries should be made as appropriate in Exhibits A-5 and A-6.

5690-610 Contingencies

This account is used to adjust overestimates of credits and underestimates of expenses. It is also used to finance travel of library personnel. Past year experience can serve to help estimate current year contingencies. The actual use of the amount in this account will be available at the end of the current year. Any adjustment will be small in view of the size of the account. Entries should be made in Exhibits A-5 and A-6 on the basis of prior year's results.

In Exhibit A-5 specific notations applicable to the sample are made where appropriate in the right-hand margin. Check marks are placed by the figures posted to Exhibit A-6. Note that the total of column 7, Exhibit A-6, equals the sum total of all the other direct costs as given in column 1, Exhibit A-5.

With the completion of all of the above, all direct costs of all departments and sub-departments of the library system have been computed and assigned. At this time Exhibit A-6 will contain all of the figures calculated for each unit. No additional cost figures will be added in later appendixes.

A check with the budget at this point will indicate that the formula contains all the direct costs of the budget. To make this check, (1) the total of the direct costs in the formula is taken ($6, 578, 896 from column 1, Exhibit A-6), and (2) the dividend subtracted from the fringe benefit costs is added back ($1, 850), and finally (3) all the offset expenditure accounts are added back ($35, 400, from Exhibit A-7, or the budget itself). The result is $6, 616, 146, which checks with the total operations and maintenance costs from the budget.

Exhibit A-5

OTHER DIRECT COSTS

Budget Account	Budget Classification Maintenance:	1 Total	2 Applicable to Service Building	3 Applicable to Branch Maintenance	4 Applicable to Main Library Maintenance	5 Applicable to Other Units (See Notes)	Notes:
5620 252	Protection Service	$ 20,000	-0-	$ 20,000	-0-	-0-	
305	Repairs and Replacements	23,500	$23,500	-0-	-0-	-0-	
307	Auto Maintenance	4,500	-0-	3,000	$ 1,500	-0-	
5690 504	Automotive Equipment	-0-	-0-	-0-	-0-	-0-	
5620 309	Janitor Supplies	7,000	139	2,954	3,794	$ 113	$80✓ to Bindery; $33✓ to Stores
360	Elevator Maintenance	12,021	-0-	3,401	8,620	-0-	
362	Building Cleaning Service	141,000	-0-	-0-	141,000	-0-	
364	Care of Grounds	4,000	-0-	2,166	1,834	-0-	
366	Maintenance of Lighting	7,000	139	2,954	3,794	113	$80✓ to Bindery; $33✓ to Stores
390	Major Repairs - Building and Grounds	8,000	-0-	8,000	-0-	-0-	
401	Heating and Air Conditioning Services	65,500	1,825	8,200	54,000	1,475	$1,046✓ to Bindery; $429✓ to Stores
402	Light and Power	130,000	2,323	47,992	77,808	1,877	$1,331✓ to Bindery; $546✓ to Stores
408	Utility Service and Fuel	25,250	-0-	25,250	-0-	-0-	
413	Private Car Rental	2,300	-0-	579	520	1,201	$230✓ to Administration; $971✓ to Loan and Registration
414	Rental of Buildings and Space	2,700	-0-	2,700	-0-	-0-	
450	Uniform Allowance	-0-	-0-	-0-	-0-	-0-	
501	Equipment	3,000	-0-	3,000	-0-	-0-	
5690 502	Building Equipment	1,250	120	1,130	-0-	-0-	
	Sub-totals A	$457,021	$28,046	$131,326	$292,870	$4,779	

Exhibit A-5
(continued)

Budget Account	Budget Classification Non-Maintenance:	1 Total	2 Applicable to Service Building	3 Applicable to Branch Maintenance	4 Applicable to Main Library Maintenance	5 Applicable to Other Units (See Notes)	Notes:
5620 361	Contractual Coat Rental	$ 3,000	-0-	-0-	-0-	✓ $ 3,000	100% to Service Bureau
5630 301	Supplies and Expense	30,700	-0-	-0-	-0-	✓ 30,700	100% to Bindery
374	Contract Binding	23,000	-0-	-0-	-0-	✓ 23,000	100% to Bindery
5690 362	Television Programs	2,000	-0-	-0-	-0-	✓ 2,000	100% to Community and Group Services
374	Acquisition and Recruiting Expense	1,400	-0-	-0-	-0-	✓ 1,400	100% to Personnel
495	Insurance - Book Collections	-0-	-0-	-0-	-0-	-0-	55% to Burton Historical, 15% to Automotive History, 30% to Rare Books
610	Contingencies	3,400	-0-	-0-	-0-	✓ 3,400	(For this example only, charged to Administration for, e.g., travel expenses)
	Sub-totals B	$ 63,500	-0-	-0-	-0-	$63,500	
	Totals	$520,521	$28,046 ✓	$131,326 ✓	$292,870 ✓	$68,279	

Appendix A-6

TOTAL DIRECT COSTS OF ALL DEPARTMENTS AND SUB-DEPARTMENTS

Exhibit A-6 provides a convenient analysis form for determining total direct costs of each department and sub-department of the library system. Exhibit A-6 accumulates all the data analyzed in Appendixes A-1 through A-5. To calculate the total costs of each unit, each row must be summed across the columns. The amounts should be placed in column 1 of the respective rows.

After the total direct costs for each department and sub-department have been computed, the amounts should be entered into Exhibit A-8 of Appendix A-8 for allocation purposes. The details of all the allocation bases used to determine library service costs are presented in that appendix.

Exhibit A-6

TOTAL DIRECT COSTS BY DEPARTMENT AND SUB-DEPARTMENT

Department/Sub-department	1 Total Direct Costs	2 Salaries and Wages	3 From Exhibit A-1 Fringe Benefits @ .16860 $/$	4 From Exhibit A-2 Library & Office Supplies & Expense	5 From Exhibit A-3 Book, Periodical, & Film Costs	6 From Exhibit A-4 Telephone Costs	7 From Exhibit A-5 Other Direct Costs
Administration	$ 77,556	$ 62,500	$ 10,537	$ 265		$ 624	$ 3,630
Personnel	41,827	34,000	5,732	320		375	1,400
Business Management							
- Administration	22,911	19,500	3,287	-0-		124	
- Business Office	70,597	59,000	9,947	1,275		375	
- Purchasing Office	24,245	20,500	3,456	165		124	
- Stores	9,020	6,500	1,095	260		124	1,041
- Bindery	246,898	162,800	27,447	165		249	56,237
- Printing Unit	33,473	25,700	4,332	3,317		124	
- Mail Room	49,144	41,700	7,030	165		249	
Maintenance							
- Administration	22,961	19,500	3,287	50		124	
- Service Building Staff	195,695	143,000	24,109	165		375	28,046
- Main Library Maintenance	505,264	179,700	30,296	268		2,130	292,870
- Branch Library Maintenance	410,479	236,000	39,788	3,365		(Incl. in 27 B. L.)	131,326
Publications and Exhibits	41,675	27,500	4,636	9,290		249	
Book Selection	107,165	89,500	15,089	1,952		624	
Catalog							
- Administration	24,664	21,000	3,540	-0-		124	
- Reference Services Cataloging	280,900	235,200	39,653	5,923		124	
- Home Reading Services Cataloging	54,707	44,000	7,418	3,165		124	

Exhibit A-6
(continued)

Department/Sub-department	1 Total Direct Costs	2 Salaries and Wages	3 From Exhibit A-1 Fringe Benefits @ .16860 $/$	4 From Exhibit A-2 Library & Office Supplies & Expense	5 From Exhibit A-3 Book, Periodical, & Film Costs	6 From Exhibit A-4 Telephone Costs	7 From Exhibit A-5 Other Direct Costs
Home Reading Services							
- Administration	$ 23,251	$ 19,500	$ 3,287	$ 215		$ 249	
- Loan and Registration	124,894	104,000	17,534	260		2,129	$ 971
- Tabulating	98,059	59,200	9,980	28,755		124	
- Children's Service	19,570	16,500	2,781	165		124	
- Young Adult Service	19,570	16,500	2,781	165		124	
- Extension Service	14,421	(Rest in 27 B.L.) 12,200	2,056	165		(Incl. in 27 B.L.)	
- 27 Branch Libraries	2,416,582	1,824,100	307,564	7,106	$270,069	7,743	
- Downtown Library	355	(In 27 B.L.)	-0-	355		(Incl. in 27 B.L.)	
- Children's Library	53,894	39,650	6,684	165	5,834	1,561	
- Browsing and Young Adult Library	95,218	66,850	11,270	278	15,648	1,172	
- Schools Department	58,910	46,000	7,755	165	4,210	780	
- Film Department	61,111	41,000	6,912	1,527	10,500	1,172	
Reference Services							
- Administration	23,251	19,500	3,287	215		249	
- Service Bureau	38,591	30,000	5,057	285		249	3,000
- Music and Performing Arts	89,699	66,750	11,253	1,584	8,940	1,172	
- Language and Literature	94,715	66,750	11,253	277	14,874	1,561	
- Fine Arts	92,540	66,750	11,253	605	12,371	1,561	
- Rare Books	39,212	30,400	5,125	165	2,350	1,172	
- Technology and Science	221,881	150,250	25,331	620	43,336	2,344	

Exhibit A-6
(continued)

Department/Sub-department	1 Total Direct Costs	2 Salaries and Wages	3 From Exhibit A-1 Fringe Benefits @ .16860 $/$	4 From Exhibit A-2 Library & Office Supplies & Expense	5 From Exhibit A-3 Book, Periodical, & Film Costs	6 From Exhibit A-4 Telephone Costs	7 From Exhibit A-5 Other Direct Costs
Reference Services (continued)							
- Automotive History	$ 18,192	$ 14,900	$ 2,512			$ 780	
- Philosophy, Religion and Education	113,988	86,750	14,625	$ 165	$ 10,887	1,561	
- Business and Finance	91,279	66,750	11,253	495	11,220	1,561	
- History and Travel	128,092	95,250	16,058	2,994	11,838	1,952	
- General Information and Biography	148,364	111,750	18,840	265	13,996	3,513	
- Burton Historical	107,000	89,250	15,047	359	-0-	2,344	
- Sociology and Economics	103,315	67,250	11,338	535	22,631	1,561	
- Municipal Reference Library	31,771	23,900	4,029	165	3,677	(Incl. in 27 B.L.)	
Community and Group Services	31,990	24,500	4,130	580	-0-	780	$ 2,000
Total - All Direct Costs	$6,578,896	$4,683,800	$789,674	$78,740	$462,381	$43,780	$520,521

Appendix A-7

OFFSET ACCOUNTS AND MISCELLANEOUS REVENUES

Certain accounts appearing in the appropriations part of the Detroit Public Library budget have corresponding offsetting revenue accounts. Since the library generates a small share of its own revenues, these amounts should serve to reduce to some degree the amounts to be shared by the parties concerned. The library also has income from sources other than those mentioned above: from certain governmental units. These accounts are justifiably excluded from cost sharing considerations.

Specific accounts are now discussed. All items are set forth in Exhibit A-7.

OFFSET ACCOUNTS

5690-383 Purchase of Rental Books and Records

This account is offset by 4410-Book Rentals and 4411-Record Rentals. Account 5690-383 is never allowed to exceed the total of budgeted 4410 and 4411. Discrepancies will not be material.

5690-384 Purchases by Gift

Purchases by gift are not allowed to exceed gift income; the income must be received before the expenditures are made. The offset account is 5611-Gifts-Budgeted.

5690-385 Replacement of Lost and Damaged Books

Revenues generated from collections from patrons for lost and damaged books, as estimated in 6215-Lost and Damaged Books, the offsetting account, go to replace items not returned or irreparably damaged.

5690-387 Purchase of Printing Matter for Sale

This item is more than offset by 6442-Sale of Printed Material. The surplus comes primarily from selling copying services to patrons at a price higher than cost of materials. This surplus should go to reduce total amounts to be shared by the parties concerned.

5690-388 Purchases from Service Receipts

This item is offset by 6548-Service Receipts—Other Units of Government. Service receipts are paid to the library by various units of government to purchase and store for those units of government materials that the library would not otherwise purchase.

If ever a service receipt account has no corresponding expenditure account, that receipt should be regarded as a miscellaneous revenue and treated accordingly. In the 1966-67 budget this did in fact occur with 6714-O. C. D. Service Reimbursement.

MISCELLANEOUS REVENUES

Internally Generated

The miscellaneous revenues generated by the library are accounts 3203-Library Fines, 6542-Library Non-Resident Fees, and 9900-Other Revenues. Accounts 3203 and 6542 are self-explanatory. Account 9900 records sales of old equipment and similar items and is hence an internally generated revenue. This account should be split up into an amount applicable to the Main Library and an amount applicable to the branch libraries.

Account 3203-Library Fines should be split pro rata between the Main Library and the branches on the basis of circulation, since the fine revenues are realized from circulation activities. Refer to Exhibit A-7 for illustration.

Externally Generated

The library receives income from two external sources: 5551-Court Fines, and 5570-State Aid. These sources are independent of any library activity. Some share of these revenues should apply to the Main Library and some to the branch libraries. Since these revenues are intended to offset the costs of library operations, an amount should accrue to the Main Library in proportion to the relative total cost of operations. This allocation basis should be carried through to each patron-serving unit in the Main Library.

Thus, if miscellaneous externally generated revenues amount to $450,000 and total costs of library operations as determined from Exhibit A-8 amount to $6,000,000, then each patron-serving unit of the Main Library should receive an assignment of $\frac{450,000}{6,000,000} = 7.5\%$ of its total cost of operation. That is, if the fully allocated costs of the

Schools Department, for example, is $100,000, then $7,500 of these revenues would apply to that unit. This allocation along with the others should be made in Exhibit A-7. Postings to Exhibit A-9 in Appendix A-9 should be made as appropriate.

In the sample illustration, the total of library fines and library non-resident fees (Total D) is split between the branches and the Main Library on the hypothetical assumption that total branch circulation is 3,000,000 and total Main Library circulation is 600,000, i.e., one-sixth of Total D is assigned to the Main Library. Account 9900-Other Revenues is assigned to 27 branch libraries for convenience, assuming all equipment sales were initiated by the branches in this sample year.

From Exhibit A-8 it can be seen that the total cost of Main Library operations is $2,995,471; of the rest of the system $3,583,425. Hence, 45.531% of the miscellaneous externally generated revenues apply to the Main Library in Exhibit A-7. Both Exhibits A-7 and A-9 are completed on the assumption that the excess from the offset accounts applies to the Main Library only.

Exhibit A-7

OFFSET ACCOUNTS AND MISCELLANEOUS INTERNALLY AND EXTERNALLY GENERATED REVENUES

Budget Account	Offset Accounts	Total
	Expenditures:	
5690 383	Purchases of Rental Books and Records	$19,000
384	Purchases by Gift	2,000
385	Replacement of Lost and Damaged Books	10,000
387	Purchase of Printing Matter for Sale	3,700
388	Purchases from Service Receipts	700
	Total A	$35,400
	Revenues:	
4410	Book Rentals	$11,000
4411	Record Rentals	8,000
5611	Gifts Budgeted	2,000
6215	Lost and Damaged Books	10,000
6442	Sale of Printed Material	11,000
6548	Service Receipts - Other Units of Government	700
67144	OCD Service Reimbursement	750
	Total B	$43,450
	Total B	$43,450
	- Total A	35,400
	Total C	$ 8,050

Exhibi
(conti

ALLOCATION TO MAIN LIBRARY PATRON-SER

Budget Account	Miscellaneous Internally Generated Revenues:	1 Total	2 Applic-able to Branches	3 Applic-able to Main	4 Chil-dren's Library	5 Browsing & Young Adult Library	6 Film Depart-ment	7 Schools Depart-ment	8 Fine Arts	9 Lan-guage & Litera-ture
3203	Library Fines	148,000								
6542	Library Non-Resident Fees	3,200								
	Total D	151,200	126,000	25,200						
9900	Other Revenues	6,000	6,000	-0-						
	Miscellaneous Externally Generated Revenues:									
5551	Court Fines	158,000								
5570	State Aid	308,500								
	Total E	466,500	254,098	212,402						
	Offset Accounts Excess:				7,824	12,554	5,325	7,032	12,229	14,031
	Total C (Previous Page)	8,050		8,050						
	Total	631,750	386,098	245,652	7,824	12,554	5,325	7,032	12,229	14,031

Exhibit A-7
(continued)

TION TO MAIN LIBRARY PATRON-SERVING DEPARTMENTS AND SUB-DEPARTMENTS

6 lm epart- ent	7 Schools Department	8 Fine Arts	9 Language & Literature	10 Music & Performing Arts	11 Technology & Science	12 Automotive History	13 Sociology & Economics	14 Philosophy, Religion & Education	15 Business & Finance	16 History & Travel	17 General Information & Biography	18 Burton Historical	Ra Bo
5,325	7,032	12,229	14,031	12,394	31,214	1,998	19,512	14,028	10,984	16,025	18,630	16,882	
5,325	7,032	12,229	14,031	12,394	31,214	1,993	19,512	14,028	10,984	16,025	18,630	16,882	

TMENTS AND SUB-DEPARTMENTS

11 Technology & Science	12 Automotive History	13 Sociology & Economics	14 Philosophy, Religion & Education	15 Business & Finance	16 History & Travel	17 General Information & Biography	18 Burton Historical	19 Rare Books	20 Community & Group Services	21 Loan & Registration
										25,200
31,214	1,998	19,512	14,028	10,984	16,025	18,630	16,882	4,600	2,800	12,390
31,214	1,993	19,512	14,028	10,984	16,025	18,630	16,882	4,600	2,800	37,590

Appendix A-8

TOTAL DEPARTMENT AND SUB-DEPARTMENT COST CALCULATION AND ALLOCATION

This appendix discusses the step-by-step cost allocation procedure and is the essence of the cost formula.

The complexities of the process to be followed can best be understood if it is constantly borne in mind that the object of this exercise is to determine the full cost of each patron-serving activity of the Library by allocating to each patron-serving activity its proper share of all the other costs of operating the Library.

Exhibit A-8 provides a convenient cost allocation analysis form. In column 2 the total direct costs for each unit as calculated in Exhibit A-6 should be inserted. Note that 24 supporting units must be allocated in order to determine the operating costs of the patron-serving units. (A check with the list of supporting units in the body of this report indicates 26 units. The two "missing units" are (1) Switchboard Service from Reference Services, which has been treated under telephone costs in Appendix A-4, and (2) Branch Library Maintenance, which is in no way applicable to the services opened under the Project.)

A step-by-step description of the 24 allocations follows.

1. Administration Department costs should be allocated to Personnel, Business Administration, Maintenance Administration, Reference Services Administration, and Home Reading Services Administration by the following percentages: Personnel, 15%; Business, 20%; Maintenance, 15%; Reference Services, 35%; Home Reading Services, 15%. The above percentages and units receiving the allocations were determined upon the basis of extensive discussion with the Administration Department; the percentages arrived at are thought to be accurate reflections of the application of department efforts over a long period of time.

   Since the sum of column 2 and column 3 is the amount to be allocated, it should be placed in row 1 of column 4, with double underscore. In column 4 the allocations of Administration Department costs as described above should be entered into the appropriate rows. An "X" should be placed in column 1 of row 1 to indicate that the costs of Administration have been allocated. An "X" should be placed in all rows of column 1 if the costs of the corresponding department are to be allocated. A total should be entered into column 1 only if the department's costs are not to be allocated; this will be the case for all the patron-serving units and for Branch Library Maintenance. The grand total of column 1 in this exhibit must equal the grand total of all direct costs as given in column 2 of the exhibit.

2. Personnel Department costs should now be totaled. Total allocated costs in column 3 should equal the sum of all costs allocated to Personnel thus far. These costs consist of the single allocation from Administration. The total of direct plus allocated costs can now be entered in column 5 of row 2, with double underscore. The allocation basis used for distributing Personnel costs is pro rata number of people budgeted. That is, if eight out of 800 budgeted employees work in unit Z, that unit should be charged with 1% of Personnel costs to be allocated. For operational convenience, a Personnel cost-per-position application rate can be computed to two decimal places, analogous to the fringe benefit application rate of Appendix A-1. This rate should be multiplied by the number of budgeted positions of each unit and entered into the appropriate row of column 5 of Exhibit A-9.

   A problem might arise as to the handling of budgeted hours, for part-time help. An estimate can be made as to the average length of time worked by such a part-time employee. The number of budgeted hours can then be translated into budgeted personnel. The allocation assumptions made here are (1) personnel costs vary approximately as the number of budgeted personnel; (2) all positions are approximately equally difficult to fill; (3) turnover is approximately the same for all categories of employees. Discussion with the personnel director indicates the assumptions are reasonable.

   Personnel Department costs will now have been allocated properly, except for small rounding errors on the application rate.

3. Business—Administration costs should now be totaled, in the same manner as above, and should be placed in column 6 of that row, with double underscore, indicating it is the amount to be allocated.

   Upon discussion with the business director it was determined that about 5% of Business—Administration's time is normally devoted to each of (a) Business—Office; (b) Purchasing and Stores; (c) Bindery; (d) Printing Unit; and (e) Mail Room. Hence, a total of 25% of Business—Administration costs should be so allocated in column 6.

   The remainder of Business—Administration time is devoted, approximately, to general personnel work, 15%; fund accounting, 20%; and budget preparation and control, 40%. The best allocation basis to distribute the remainder of this unit's costs is pro rata on total direct costs of the remaining departments and sub-departments. This allocation base is more appropriate than any other: more salary and wages for a given unit imply more personnel employed; more supplies and expense and more salaries and wages imply more accounting, budgeting, and control effort.

   Since the above allocation base seems to be the most appropriate for

4. Business Office costs, these costs should be totaled in row 5 column 1 and placed in row 5 column 7, with double underscore. These costs should then be lumped with the remaining 75% of Business—Administration costs and allocated accordingly. Operationally, this entire lump sum can be allocated pro rata to units on basis of total direct costs given in column 2 of Exhibit A-8. An application rate should be computed in order to facilitate calculations. The rate equals the lump sum divided by the grand totals of column 2 beginning with Maintenance—Administration and concluding with Community and Group Services. The rate should be carried out to five decimal places to minimize rounding errors.

   At this point Business—Administration and Business Office costs will have been allocated properly.

5. Purchasing Office costs should be totaled and allocated to

6. Stores, since the same allocation base is appropriate for both units. Allocation base is pro rata per dollar of library and office supplies and expense, and other items the departments control. Appendix A-2 supplies most of all the necessary information to perform the allocation. To the figures in column 1 of Exhibit A-2 should be added certain accounts from Exhibit A-5, viz., 5620-305, -309, -364, -366, -390, -501, 5630-301 and 5690-502 since these accounts relate to items that Purchasing and Stores control. The allocation of these accounts to the respective departments has been indicated in Exhibit A-5: the 5620-accounts and 5690-accounts are divided among Service Building, Branch Maintenance, and Main Library Maintenance, while 5630-301 is assigned to Bindery.

7. Bindery costs should be totaled and allocated on the basis of the bindery quotas given to Home Reading Services and Reference Services. These quotas are distributed by the directors of those two departments to each of their sub-departments. The bindery quota system was developed by the business director and takes into account the relative complexity of binding different size books and periodicals. All costs of this sub-department will be allocated to sub-departments of Reference Services and Home Reading Services.

8. Maintenance–Administration costs should now be totaled. Discussion with the maintenance director indicates that 50% of these costs should be assigned to Branch Library Maintenance, with the remaining 50% assigned to Service Building Staff. Virtually no time is devoted to Main Library Maintenance from this account since the assistant maintenance director is in charge of overseeing those operations. Part of the costs of this sub-department will flow through to the Main Library however, since

9. Maintenance–Service Building Staff costs will be allocated partially to the Main Library. The costs of this sub-department should be totaled and split between Branch Library Maintenance and Main Library Maintenance. The allocation basis should be pro rata by floor areas of Main Library and branches.

10. Main Library Maintenance costs should be totaled and allocated to all Main Library departments except to the sub-departments housed in the administrative offices area that have been previously allocated. The allocations to the remaining departments and sub-departments should be made upon relative floor area size. To make this allocation the floor areas of all departments and sub-departments, exclusive of those housed in the administrative office area, must be computed. Stack areas should be included with their associated sub-departments. See Exhibit A-10.

11. Printing Unit costs should now be totaled. The costs of this sub-department should be allocated to the principal beneficiaries of the efforts of this unit, viz., Catalog Department, Publications and Exhibits, and Community and Group Services. Discussions with the business director indicate that approximately 40% of costs associated with this department is assignable to Catalog Department for catalog card reproduction; 30% to Publications and Exhibits; 5% to Community and Group Services. The remaining 25% is assignable to Loan and Registration, since this unit makes extensive use of printed forms to control circulation. The appropriate allocations should be made in column 14 of Exhibit A-8.

12. Mail Room costs should be totaled. The Mail Room handles the sorting of inter- and intra-library book transfers, and also the sorting of books returned from circulation at the Main Library. Discussion with the business director indicates that roughly 50% of the costs of this sub-department are assignable to the branch libraries and 50% to the Main Library. The 50% assigned to the Main Library should be divided equally among the circulating sub-departments, exclusive of Film Department. The 50% assigned to the branches can be conveniently assigned to 27 Branch Libraries since this item will not be allocated.

13. Publications and Exhibits costs should now be totaled. This department publishes most of the brochures, pamphlets, and similar materials required by the various departments and sub-departments. This department also assists in the planning and preparation of virtually all library exhibits. As well as can be determined, approximately 25% of the time of this department is spent on publications work, with the remaining 75% spent on

exhibit preparation and construction. These percentages should be used to split costs between the two functions. Within the publications function, the best measure of level of activity, and hence the best allocation basis, is pro rata number of titles published for each unit concerned. Within the exhibits function the best measure of level of activity, and hence the best allocation basis, is pro rata number of exhibits constructed for each unit concerned. It is acknowledged that individual publications vary widely in complexity, as do individual exhibits. Actual work times spent on all assignments could be kept for greatest accuracy, but it is doubtful that such would be beneficial in extent to warrant them. In recent years titles published varied from 110 to 131, while exhibits constructed varied from 430 to 570. The numbers of titles and exhibits appear to be large enough to permit the above allocation assumptions.

14. Book Selection costs should now be totaled. The Book Selection department assists in book selection activities and handles all clerical work associated with the ordering and receiving of books for all library units. Actual selections are carried out by book committees composed of members of various library units serving on a rotational basis. The cost of their time is not included in the costs of the Book Selection department. It is assumed that each library unit is fairly represented over a long period of time, so that costs of personnel time associated with selection activities are borne by the respective units concerned in proper proportion.

Since most effort is required for clerical work and preparation for cataloging of individual volumes, the allocation basis for Book Selection costs should be pro rata on volumes purchased by individual units, to those units. The fact that Burton Historical, for example, has a separate trust-funded book budget will not preclude that sub-department from sharing Book Selection costs. If titles were used as a measure of activity level, question would arise as to how to assign titles selected to branches, since the Main Library houses virtually all titles contained in the branches. If book budget figures were used as the basis for allocation, Burton Historical would bear no share of costs of Book Selection, nor would sub-departments purchasing books from Friends' Funds and Friends' Research Funds. Data should be collected as to the number of volumes purchased by each library unit to facilitate the allocation process.

15. Catalog–Administration costs should be totaled. The costs of this unit should be allocated to Reference Services Cataloging and Home Reading Services Cataloging pro rata to the number of staff employed in each sub-department.

16. Home Reading Services Cataloging (or Branch Processing as it is most often called) costs should be totaled. This sub-department does all the original cataloging for the Children's Library, the Browsing Library and Young Adult Library. This department also pastes all book pockets and record jacket pockets for the entire library system.

    The cataloging for Children's Library, Browsing Library, and Young Adult Library is done by the supervisor of this unit. This work consumes about one-third time. Taking this and the above facts into consideration, one-fifth of the costs of this unit should be divided equally among Children's Library, and Browsing Library and Young Adult Library. The remaining four-fifths should be allocated to units on the basis of pro rata volumes purchased. The data compiled for Book Selection allocations under item 14 should prove useful for the latter task.

17. Reference Services Cataloging costs should be totaled. These costs should be allocated to the various sub-departments of Reference Services on the basis of pro rata titles cataloged for each department. Since General Information often selects books chosen by other Reference Services sub-departments, it is reasonable not to charge General Information with the cataloging costs. Consequently, General Information should be charged pro rata on the basis of titles selected for General Information only. This basis implies General Information would bear a very small fraction of Reference Services Cataloging costs.

    The information needed to make the allocations is (1) number of titles cataloged for each unit of Reference Services; (2) number of titles cataloged for General Information only. Note that some share of costs will apply to Municipal Reference Library, and hence will be excluded from sharing considerations.

18. Home Reading Services—Administration costs should be totaled. This sub-department oversees all the branch libraries, the extension service (bookmobile service), several other special services, and the circulation of materials for all sub-departments. The costs of this department should be allocated in equal proportion among the various sub-departments supervised. Each of the following units should bear one-thirty seventh of total Home Reading Services—Administration costs: Loan and Registration; Tabulating Machine Bureau; Children's Service; Young Adult Service; Film Department; Children's Library; Browsing Library (including Young Adult Library); Extension Service; Schools Department; Downtown Library; and each of the 27 Branch Libraries.

The above allocation base was arrived at through discussion with the director of Home Reading Services concerning the degree of administrative effort devoted to the various units within the department. As can be seen above, 29 of the 37 units will be totally excluded from cost sharing consideration. The costs of the remaining units are applicable at least partially to the Main Library services.

19. Tabulating Machine Bureau costs should be totaled. These costs should be divided among the branch libraries and the Main Library on the basis of circulation. In Exhibit A-8, then, these unit costs should be assigned to 27 Branch Libraries and Loan and Registration. Hence, if for example total branch circulation were 3,000,000, and total main library circulation were 500,000, then $\frac{3,000,000}{3,500,000}$ = 85.7% of the costs would be assigned to 27 Branch Libraries. The remaining 14.3% would be assigned to Loan and Registration.

20. Loan and Registration costs should now be totaled. These costs will not be allocated among the various Main Library units in the same manner as the other allocations. These costs instead should be entered in column 1 of row 26 entitled Loan and Registration. This figure constitutes the fully allocated cost of controlling Main

Library circulation, and should be entered in Exhibit A-9 of Appendix A-9.

21. Children's Service costs should now be totaled. This unit supervises book selection for the Children's Library at the Main Library, and trains the children's librarians at the various branches. Conducting children's tours at the library consumes a good deal of this unit's time. Presently these tours are limited to Detroiters. The senior clerk employed in this sub-department works at the children's charge desk, processing overdues and new books. Virtually all of the time of this person is applicable to Children's Library.

    In view of the operations of this unit, one-half of the costs of this sub-department should be allocated to Children's Library. This estimate takes into account the clerk employed and the relative amount of time the coordinator of the unit spends on book selection supervision. The remaining one-half of the costs applicable to this unit should be assigned to the 27 Branch Libraries, since those costs are not relevant for cost sharing considerations.

22. Young Adult Service costs should now be totaled. This unit provides services to both Main Library units and the branches, as well as to outside agencies. Approximately one-half of the time of this unit is spent reviewing books for selection for the Young Adult Library located at the Main Library. All books designated as suitable for inclusion in the Young Adult Library are so indicated by this unit on the weekly Home Reading Services Book Selection List. The young adult librarians of the various branches in turn review the indicated books to determine suitability for their particular branch. Because one-half time, approximately, is devoted to book selection for the Young Adult Library, one-half the costs of this unit should be allocated to the Browsing and Young Adult Library.

    The remainder of the time of Young Adult Service is devoted to training young adult librarians at the various branches, and also within the Detroit public school system. A good deal of time throughout the year is devoted to the production of radio and television programs suited for young adults. These costs should all be excluded from the portion to be shared by the parties concerned.

For operational purposes, then, one-half the costs of this unit should be allocated to Young Adult Library and one-half to 27 Branch Libraries, since all the latter's costs will be excluded from sharing considerations.

23. Reference Services—Administration costs should be totaled. Of the sub-departments supervised by the director of Reference Services, only the Switchboard Service should not bear a share of supervisory costs. Switchboard Service consumes a negligible amount of administrative time in the normal course of operations. All other sub-departments should bear a pro rata share of administrative costs on the basis of number of sub-departments.

In the process of defining the sub-departments, Automotive History should be considered part of Technology and Science, and Biography should be considered part of General Information. Thus, there are 13 units among which to allocate Reference Services—Administration costs, each at one-thirteenth of the total: Fine Arts; Music and Performing Arts; Language and Literature; Rare Books; Technology and Science (Automotive History included); Business and Finance; Sociology and Economics; History and Travel; Philosophy, Religion and Education; General Information (Biography included); Burton Historical; Municipal Reference Library; Service Bureau.

From the above it can be seen that one-thirteenth of all costs of Reference Services—Administration applies to Municipal Reference Library and hence will be excluded from cost sharing considerations. The completion of this allocation leaves one more to be performed before final costs of the patron service-providing sub-departments of the Detroit Public Library are totaled.

24. Reference Services—Service Bureau costs should be totaled. The Service Bureau provides page service to all Reference Services sub-departments located at the Main Library building. Each sub-department that utilizes stacks has equal access to the services of this unit. Three sub-departments of Reference Services at the Main Library do not make use of stacks: page services; Burton Historical; Rare Books; Automotive History. The costs of the Service Bureau, then, should be divided equally among: Fine Arts; Music and Performing

Arts; Language and Literature; Technology and Science; Business and Finance; Sociology and Economics; History and Travel; Philosophy, Religion, and Education; General Information and Biography. The Municipal Reference Library, of course, is excluded from the sharing sub-departments.

From the above it can be seen that one-ninth of Service Bureau costs should be allocated to each of the above mentioned sub-departments. With the completion of this allocation, all costs for each service sub-department and department (Community and Group Services) should be totaled. These totals constitute the cost of providing patron services at the Main Library of the Detroit Public Library.

TOTAL DEPARTMENT

	Department/Sub-department	1 Total Costs - Direct Plus Allocated	2 Total Direct Costs (From Ex. A-6)	3 Total Allocated Costs	4 Administration	5 Personnel @ $75.08/ Pos.	6 Business - Administration	7 Business - Office	8 Business - Purchasing	9 Business - Stores	10 Business - Bindery
	Administration	xxx	77,556	-0-	77,556						
	Personnel	xxx	41,827	11,633	11,633	53,460					
	Business										
	- Administration	xxx	22,911	15,662	15,512	150	38,573				
	- Office	xxx	70,597	31,611		750	30,861	102,208			
	- Purchasing	xxx	24,245	2,467		150	1,928	389	26,712		
	- Stores	xxx	9,020	26,931		75		144	26,712	35,951	
	- Bindery	xxx	246,898	14,776		1,952	1,928	3,962		6,934	261,674
	Maintenance										
	- Administration	xxx	22,961	12,162	11,633	150		368		11	
	- Service Building	xxx	195,695	27,430		1,350		3,141		5,378	
	- Main Library	xxx	505,264	137,765		2,175		8,109		2,165	
x	- Branch Libraries	540,931	410,479	130,452		3,225		6,588		5,268	
	Business										
	- Printing Unit	xxx	33,473	12,397		300	1,928	537		741	
	- Mail Room	xxx	49,144	10,829		600	1,928	788		37	
	Publications and Exhibits	xxx	41,675	20,512		300		668		2,076	
	Book Selection	xxx	107,165	10,027		1,200		1,719		436	
	Catalog										
	- Administration	xxx	24,664	1,340		150		395		-0-	
	- Home Reading Services	xxx	54,707	34,519		525		878		707	
	- Reference Services	xxx	280,900	39,592		2,702		4,508		1,323	
	Home Reading Services										
	- Administration	xxx	23,251	13,277	11,633	150		373		48	
	- Tabulating	xxx	98,059	12,033		900		1,573		6,427	
	- Loan and Registration	168,368	124,894	43,474		1,576		2,004		58	
	- Children's Service	xxx	19,570	2,866		150		314		37	
	- Young Adult Service	xxx	19,570	2,866		150		314		37	
x	- Extension Service	17,145	14,421	2,724		150*		231		37	**
x	- 27 Branch Libraries	2,968,461	2,416,582	551,879		21,503		38,837		1,599	148,78
x	- Downtown Library	2,745	355	2,390		**		5		79	**
	- Children's Library	106,303	63,894	52,409		450		865		37	6,22
	- Browsing and Young Adults Library	170,568	95,218	75,350		750		1,528		62	6,58
	- Film Department	72,338	61,111	11,227		525		980		341	-0
	- Schools Department	95,539	58,910	36,629		600		945		37	4,02
	Reference Services										
	- Administration	xxx	23,251	28,789	27,145	150		373		48	-0
	- Service Bureau	xxx	38,591	5,135		450		619		63	-0
	- Fine Arts	166,157	92,540	73,617		675		1,485		135	4,39
	- Language and Literature	190,644	94,715	95,929		675		1,520		61	5,48
	- Music and Performing Arts	168,394	89,699	78,695		675		1,439		354	7,31
	- Technology and Science	424,139	221,881	202,257		1,651		3,561		138	27,81
	- Automotive History	27,159	18,192	8,967		150		291		***	***
	- Sociology and Economics	265,131	103,315	161,816		675		1,658		119	15,55
	- Philosophy, Religion, and Education	190,608	113,988	76,620		975		1,829		37	4,20
	- Business and Finance	149,24	91,279	57,964		675		1,465		110	4,39
	- History and Travel	217,74	128,092	89,650		1,050		2,055		669	4,39
	- General Information and Biography	253,16	148,364	104,800		1,201		2,381		59	8,23
	- Burton Historical	229,410	107,000	122,410		975		1,717		80	10,97
	- Rare Books	62,512	39,212	23,300		375		629		37	1,8
x	- Municipal Reference Library	54,143	31,771	22,372		225		510		37	1,46
	Community and General Services	38,052	31,990	6,062		225		513		129	-0
	Total	6,578,896	6,578,896	xxx	77,556	53,460	38,573	102,208	26,712	35,951	261,67

x indicates cost not to be shared

* Rest in 27 Branch Libraries

** Included in 27 Branch Libraries

*** Included in Technology

§ Home Reading Services

xxx See Text A-8

Exhibit A-8

TOTAL DEPARTMENT AND SUB-DEPARTMENT COST ALLOCATION SPREAD SHEET

	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ss ce	Business - Purchasing	Business - Stores	Business - Bindery	Maintenance - Administration	Maintenance - Service Building	Maintenance - Main Library	Business - Printing Unit	Business - Mail Room	Publications & Exhibits	Book Selection	Catalog - Administration	Catalog - Home Reading Services	Catalog - Reference Services	H.R.S. § - Administration	H.R.S. § - Tabulating	H.R.S. § - Loan & Registration	H.R. - Chi dren Servi
208																	
389	26,712																
144	26,712	35,951															
962		6,934	261,674														
368		11		35,123													
141		5,378		17,561	223,125												
109		2,165			125,316	643,029											
588		5,268		17,562	97,809												
537		741				8,891	45,870										
788		37				7,476		59,973									
668		2,076				3,687	13,761		62,187								
.719		436				6,367			305	117,192							
395		-0-				795					26,004						
878		707				15,097	13,079				4,233	89,226					
.508		1,323				4,018	5,270				21,771		320,492				
373		48				1,073								36,528			
.573		6,427				2,146								987	110,092		
,004		58				9,032	11,467							987	18,350	Not Allocated	
314		37				1,073			305					987			22
314		37				1,073			305					987			
231		37	**						1,319	**		**		987			
,837		1,599	148,783					29,987	35,906	83,542		50,886		26,658	91,742		11
5		79	**						1,319	**		**		987			
865		37	6,221			15,659		2,498	1,319	2,630		10,525		987			1
.528		62	6,587			32,823		2,498	1,319	5,391		12,206		987			
980		341	-0-			7,075			1,319	-0-		-0-		987			
945		37	4, 025			23,669		2,499	1,319	1,584		964		987			
373		48	-0-			1,073											
619		63	-0-			-0-											
.485		135	4,391			33,607		2,499	1,319	1,382		842	18,420				
.520		61	5,489			29, 574		2,499	1,319	3, 075		1,873	40,982				
.439		354	7,319			34,456		2,499	1,319	1,457		888	19,427				
.561		138	27,812			88,968		2,499	1,319	4,513		2,749	60,165				
291		***	***			7,207		***	1,319	***		***	***				
.658		119	15,553			67,697		2,499	1,319	4,247		2,587	56,601				
.829		37	4,208			29,816		2,499	1,319	1,813		1,104	24,159				
.465		110	4,391			15,011		2,499	1,319	1,582		963	21,088				
.055		669	4,391			40,066		2, 499	1,319	1,924		1,172	25,644				
381		59	8,234			49, 075		2,499	1,319	2,087		1,271	27,813				
717		80	10,978			92,290			1,319	739		450	9,859				
629		37	1,829			12,632			1,319	165		101	2,210				
510		37	1,463			-0-			305	1,060		645	14,124				
513		129	-0-			1,583	2,293		1,319	-0-		-0-	-0-				
208	26,712	35,951	261,674	35,123	223,125	643,029	45,870	59,973	62,187	117,192	26,004	89,226	320,492	36,528	110,092	Not Allocated	

SPREAD SHEET

5 ness il m	16 Publications & Exhibits	17 Book Selection	18 Catalog - Administration	19 Catalog - Home Reading Services	20 Catalog - Reference Services	21 H.R.S. § - Administration	22 H.R.S. § - Tabulating	23 H.R.S. § - Loan & Registration	24 H.R.S. § - Children's Services	25 H.R.S. § - Young Adult Service	26 Reference Services - Administration	27 Reference Services - Service Bureau
9,973												
	62,187											
	305	117,192										
			26,004									
			4,233	89,226								
			21,771		320,492							
						36,528						
						987	110,092					
						987	18,350	Not Allocated				
	305					987			22,436			
	305					987				22,436		
	1,319	**		**		987						
29,987	35,906	83,542		50,886		26,658	91,742		11,218	11,218		
	1,319	**		**		987						
2,498	1,319	2,630		10,525		987			11,218			
2,498	1,319	5,391		12,206		987				11,218		
	1,319	-0-		-0-		987						
2,499	1,319	1,584		964		987						
											52,040	
											4,003	43,726
2,499	1,319	1,382		842	18,420						4,003	4,859
2,499	1,319	3,075		1,873	40,982						4,003	4,859
2,499	1,319	1,457		888	19,427						4,003	4,859
2,499	1,319	4,513		2,749	60,165						4,004	4,859
***	1,319	***		***	***						-0-	-0-
2,499	1,319	4,247		2,587	56,601						4,003	4,858
2,499	1,319	1,813		1,104	24,159						4,003	4,858
2,499	1,319	1,582		963	21,088						4,003	4,858
2,499	1,319	1,924		1,172	25,644						4,003	4,858
2,499	1,319	2,087		1,271	27,813						4,003	4,858
	1,319	739		450	9,859						4,003	-0-
	1,319	165		101	2,210						4,003	-0-
	305	1,060		645	14,124						4,003	-0-
	1,319	-0-		-0-	-0-							
59,973	62,187	117,192	26,004	89,226	320,492	36,528	110,092	Not Allocated	22,436	22,436	52,040	43,726

Appendix A-9

CALCULATION OF COSTS FOR PATRON SERVICES IN THE DETROIT PUBLIC LIBRARY MAIN LIBRARY

Exhibit A-9 lists all the patron services made available under the project, and also circulation control costs. The total costs of providing the services of each of the listed units should be entered from Exhibit A-8. The cost totals arrived at constitute the direct costs of those units plus their fair share of fully allocated costs of all the units contributing to their operation.

To calculate the true total amounts to be shared by the parties concerned, the appropriate amount of internally and externally generated revenues should be deducted from costs of operation. The amount applicable to the Main Library and its various services has been computed in Appendix A-7 and Exhibit A-7. With those totals entered where appropriate in Exhibit A-9, the amounts to be shared by department and sub-department are calculated and entered into column 1 of Exhibit A-9. The totals for the patron-serving units are computed by subtracting column 3 from column 2 by row.

Exhibit A-9

CALCULATION OF AMOUNTS TO BE SHARED

Patron Services Opened Under Project	1 Amounts To Be Shared (Col. 2 - Col. 3)	2 Total Costs (From Exhibit A-8)	3 Total Deductions (From Exhibit A-7)
Home Reading Services			
- Children's Library	$ 98,479	$ 106,303	$ 7,824
- Browsing and Young Adult Library	158,014	170,568	12,554
- Film Department	67,013	72,338	5,325
- Schools Department	88,507	95,539	7,032
Reference Services			
- Fine Arts	153,928	166,157	12,229
- Language and Literature	176,613	190,644	14,031
- Music and Performing Arts	156,000	168,394	12,394
- Technology and Science	392,925	424,139	31,214
- Automotive History	25,161	27,159	1,998
- Sociology and Economics	245,619	265,131	19,512
- Philosophy, Religion, and Education	176,580	190,608	14,028
- Business and Finance	138,259	149,243	10,984
- History and Travel	201,717	217,742	16,025
- General Information and Biography	234,534	253,164	18,630
- Burton Historical	212,528	229,410	16,882
- Rare Books	57,912	62,512	4,600
Community and Group Service	35,252	38,052	2,800
Total	$2,619,041	$2,827,103	$208,062

Circulation Control Costs	Total
Loan and Registration (from Exhibit A-8)	$168,368
Less: Deductions	37,590
Circulation Costs	$130,778

Exhibit A-10

FLOOR AREAS
(in square feet)

All Buildings

Main Library	410,000
Branch Libraries	320,000
Service Building	27,500
	757,500

Within Service Building

Bindery	8,722
Supply Room	3,584
Shops	15,144
	27,500

Within Main Library

Tabulating Room	728
Mail Room	2,536
Printing Room	3,016
Children's Library	5,312
Browsing and Young Adult	11,134
Burton Historical	31,306
Educational Films Department	2,400
Loan and Registration	3,064
Business and Finance	5,092
Philosophy, Religion, and Education	10,114
Sociology and Economics	22,964
History and Travel	13,591
General Information and Biography	16,647
Young Adult Service	364
Children's Service	364
Home Reading Service - Administration	364
Reference Services - Administration	364
Community and Group Services	537
Publications and Exhibits	1,251
Rare Books	4,285
Technology and Science	30,186
Automotive History	2,445
Catalog - Administration	270
Catalog - Reference Services	5,111
Catalog - Home Reading Services	1,363
Book Selection	2,160

Exhibit A-10
(continued)

Within Main Library (continued)

Music and Performing Arts	11,688
Fine Arts	11,400
Language and Literature	10,032
Schools Department	8,029
Total Floor Space of Units	218,117

1. The difference between total main library floor space and total floor space of units is the floor space of all corridors and maintenance areas.

2. Floor space of units includes stacks areas and offices.

Exhibit A-11

CALCULATION OF PURCHASING AND STORES ALLOCATION BASE

	1 L&O from Exhibit A-2	2 5620-305 Repairs and Replacements	3 5620-309 Janitor Supplies	4 5620-364 Care of Grounds	5 5620-366 Maintenance of Lighting	6 5620-390 Major Repairs	7 5620-501 Equipment	8 5630-301 Supplies and Expense	9 5690-502 Building Equipment	10 Total for Allocation Base
Administration	Not Applicable									
Personnel	Not Applicable									
Business Management										
- Administration	Not Applicable									
- Purchasing Office	Not Applicable									
- Stores	Not Applicable		$ 33	←Not Applicable→	$ 33					
- Bindery	$ 165		80		80			$30,700		$31,025
- Printing Unit	3,317									3,317
- Mail Room	165									165
Maintenance										
- Administration	50									50
- Service Building	165	$23,500	139		139				$ 120	24,063
- Main Maintenance	268		3,794	$1,834	3,794					9,690
- Branch Maintenance	3,365		2,954	2,166	2,954	$8,000	$3,000		1,130	23,569
Publications and Exhibits	9,290									9,290
Book Selection	1,952									1,952
Catalog										
- Administration	-0-									-0-
- Reference Services Catalog	5,923									5,923
- Home Reading Services Catalog	3,165									3,165

Exhibit A-11
(continued)

	1	2	3	4	5	6	7	8	9	10
		5620-305	5620-309	5620-364	5620-366	5620-390	5620-501	5630-301	5690-502	
	L&O from Exhibit A-2	Repairs and Replacements	Janitor Supplies	Care of Grounds	Maintenance of Lighting	Major Repairs	Equipment	Supplies and Expense	Building Equipment	Total for Allocation Base
Home Reading Services										
- Administration	$ 215									$ 215
- Loan and Registration	260									260
- Tabulating	28,755									28,755
- Children's Service	165									165
- Young Adults Service	165									165
- Extension	165									165
- 27 Branch Libraries	7,106									7,106
- Downtown Library	355									355
- Children's Library	165									165
- Browsing and Young Adults	278									278
- Schools Department	165									165
- Film Department	1,527									1,527
Reference Services										
- Administration	215									215
- Switchboard	Not Applicable									---
- Service Bureau	285									285
- Music and Performing Arts	1,584									1,584
- Language and Literature	277									277
- Fine Arts	605									605

Exhibit A-11
(continued)

	1 L&O from Exhibit A-2	2 5620-305 Repairs and Replacements	3 5620-309 Janitor Supplies	4 5620-364 Care of Grounds	5 5620-366 Maintenance of Lighting	6 5620-390 Major Repairs	7 5620-501 Equipment	8 5630-301 Supplies and Expense	9 5690-502 Building Equipment	10 Total for Allocation Base
Reference Services (continued)										
- Rare Books	$ 165									$ 165
- Technology and Science	620									620
- Automotive History	(Incl. in Technology and Science)									-0-
- Philosophy, Religion, and Education	165									165
- Business and Finance	495									495
- History and Travel	2,994									2,994
- General Information and Biography	265									265
- Burton	359									359
- Sociology and Economics	535									535
- Municipal Reference Library	165									165
Community and Group Services	580									580
	$76,455	$23,500	$6,967	$4,000	$6,967	$8,000	$3,000	$30,700	$1,250	$160,839

AMOUNT TO BE ALLOCATED = $35,951
ALLOCATION BASE = $160,839

$$\text{ALLOCATION RATE} = \frac{\$35,951 \text{ (See Exhibit B-8)}}{\$160,839} = \$.22352/\$$$

Appendix B[1]

METHOD AND PROCEDURE FOR DETERMINING PLACE OF RESIDENCE BY COUNTY OF CURRENT REGISTRANTS OF THE DETROIT PUBLIC LIBRARY

In Chapter One it is suggested that it would be useful to have an estimate of the county distribution of residences of the current registrants of the Detroit Public Library. Because the total number is so large, an actual count would be costly and time-consuming. A method and procedure for sampling the total registration file is suggested. In this appendix the detailed steps to be taken in conducting the sample are described and for reliability should be carried out exactly as described.

Purpose: In the 750 card files at the Detroit Public Library, containing approximately 418,000 cards, to determine the proportion of registrants residing in Detroit and in six Michigan Counties. The proportion of registrants residing in each county is to be estimated separately with a margin of error of about .01.

Sampling Plan:

1. Number from 0 to 749 the 750 card files. The number identifying a card file should be securely placed on the file.

2. The sample is to be taken in two stages. First, the files are selected. Second, a segment of cards in the selected files are chosen.

a. The files included in the sample are shown in Exhibit B-1... under the heading, "CARD FILES SELECTED." Files 21, 28, 59, 72, 101, ... , 721 have been selected with random numbers. REMOVE THESE FILES TO ONE LOCATION. IF THEY ARE ACCESSIBLE IN THEIR PRESENT LOCATION, THEY NEED NOT BE PHYSICALLY REMOVED. A "STICKER" MIGHT BE PLACED ON THE SELECTED FILES SO THAT THEY MAY BE READILY IDENTIFIED AS BEING "SELECTED."

DO NOT LOSE TRACK OF THE NUMBER ON THE FILE.

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[1] Prepared with the assistance of Dr. Richard P. Brief, Assistant Professor of Business Statistics at New York University

b. After the files included in the sample have been selected, the next step is to choose a segment in each selected file. The procedure for doing this is as follows:

i. Carefully divide the cards in each selected file into 8 equal or approximately equal segments. This may be done with the use of seven sticks or markers by: 1) dividing the cards into two equal segments; 2) dividing each of the equal segments into two equal segments; 3) dividing the "quarters" into two equal segments.

THE SEGMENTS NEED NOT BE EXACTLY EQUAL BUT SHOULD BE APPROXIMATELY EQUAL. IN OTHER WORDS, IT WILL NOT BE NECESSARY TO COUNT EACH SEGMENT TO INSURE THE EQUALITY OF ALL SEGMENTS IN A PARTICULAR FILE. A RULER MIGHT BE USED TO DIVIDE THE SEGMENTS.

NOTE THAT THE SEGMENTS SHOULD BE EQUAL IN A PARTICULAR FILE. THE SEGMENTS IN TWO DISTINCT FILES WILL NOT BE EQUAL UNLESS THE FILES CONTAIN APPROXIMATELY THE SAME NUMBER OF CARDS.

c. The segments of each file to be included in the sample have been identified in Exhibit B-1. For example, in file 21, select segment 7; in file 28, select segment 5.

d. When removing the segments, place a rubber band around the segment and mark on it (by inserting a piece of paper, etc.) the ZONE number, file number and segment number. THE ZONE NUMBER FOR A FILE MAY ALSO BE FOUND IN EXHIBIT B-1.

INDICATE WHETHER THE SEGMENT IS TO BE CODED AS "a" or "b". EXHIBIT B-1 PROVIDES THIS INFORMATION. THIS IS AN IMPORTANT STEP.

e. There will be thirty segments. Each segment should be summarized on a worksheet. THE INFORMATION THAT SHOULD BE SUMMARIZED FOR EACH SEGMENT AND A SAMPLE WORKSHEET FOR THIS SUMMARY IS SHOWN IN EXHIBIT B-2.

f. Summarize the figures from each segment worksheet (step e) on Exhibit B-3.

g. The information for each county in Exhibit B-3 is to be transferred to Exhibit B-4. There will be six such tables, one for each county.

h. Instructions for Exhibit B-4.

i. Sum Columns 1-4. (Separately)

ii. Perform Step 1, as indicated on Exhibit B-4. Carry out the division to three decimal places.

iii. Perform the calculations for each Zone as indicated in Columns 5-9.

iv. Obtain total for Column 9.

Exhibit B-1

SEGMENT OF FILES TO BE SELECTED

Frame		Card Files Selected*		Segment of File Selected*	
Zone	Card File Numbers	a	b	From a	From b
1	0-49	21	28	7	5
2	50-99	59	72	8	1
3	100-149	101	122	6	6
4	150-199	152	156	6	6
5	200-249	219	219**	7	1
6	250-299	258	264	4	3
7	300-349	320	335	2	2
8	350-399	356	370	1	6
9	400-449	401	402	6	6
10	450-499	483	484	8	2
11	500-549	522	527	7	8
12	550-599	564	573	4	4
13	600-649	611	619	3	3
14	650-699	652	653	6	1
15	700-749	720	721	5	8

* All files and segments have been selected with random numbers.

** This is not an error.

Exhibit B-2

WORK SHEETS TO SUMMARIZE RESULTS FOR EACH SEGMENT

NOTE: THERE WILL BE THIRTY COPIES OF EXHIBIT B-2, ONE FOR EACH SEGMENT.

Fill out information

Zone #
Segment (a or b)

Card File #
Segment #

County	1	2	3	4	5	6	Total
for example	III	~~IIII~~ ~~IIII~~ ~~IIII~~	III	II	I	~~IIII~~	
Totals	3	15	3	2	1	5	X

Exhibit B-3

SUMMARY OF WORK SHEETS

	Segment a							Segment b						
	Counties						TOTAL	Counties						TOTAL
Zone	1	2	3	4	5	6		1	2	3	4	5	6	
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														

Exhibit B-4

WORKSHEET FOR COUNTY

COUNTY NAME__________
COUNTY NUMBER__________

[THERE WILL BE SIX COPIES OF EXHIBIT B-4]

Columns	(1)	(2)	(3)	(4)	(5)	(6)	(7)*	(8)	(9)
	Segment a	Segment b	Segment a	Segment b	Col. 1 - Col. 2	Col. 3 - Col. 4	P x Col. 6	Col. 5 - Col. 7	Col. 8 x Col. 8
	Number in County		Total Number in Segment						
Zone									
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
Totals	TOTALS								Total

* STEP 1

Compute P = $\frac{\text{Totals in Column 1 plus Column 2}}{\text{Totals in Columns 3 plus Column 4}}$ = 3 decimal places, e.g., .018.

Note: Columns 1 and 2 show number of cards in segment belonging to this County. Columns 3 and 4 show total number of cards in segment.